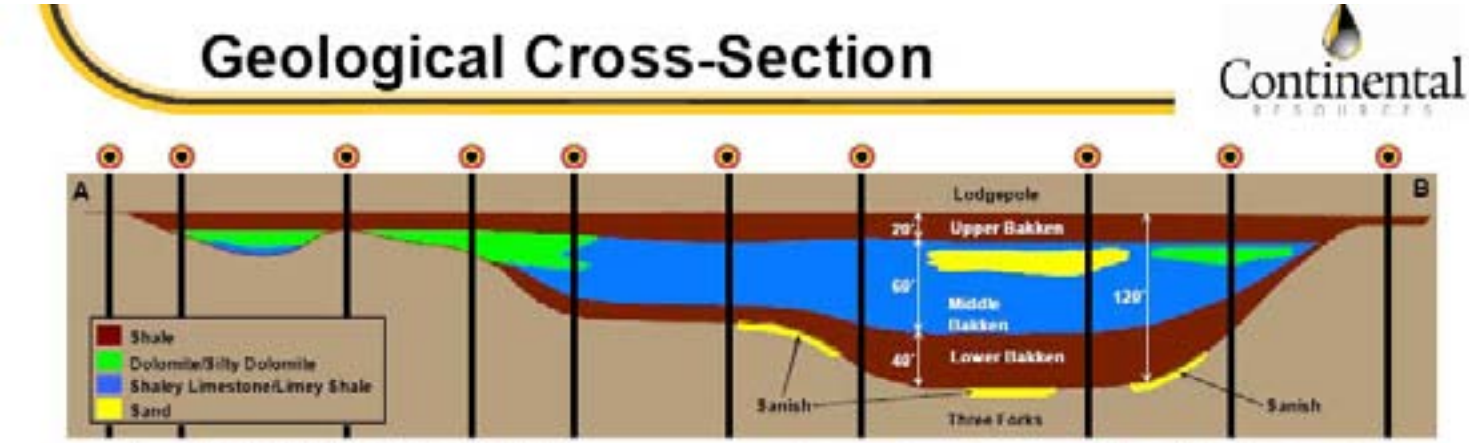
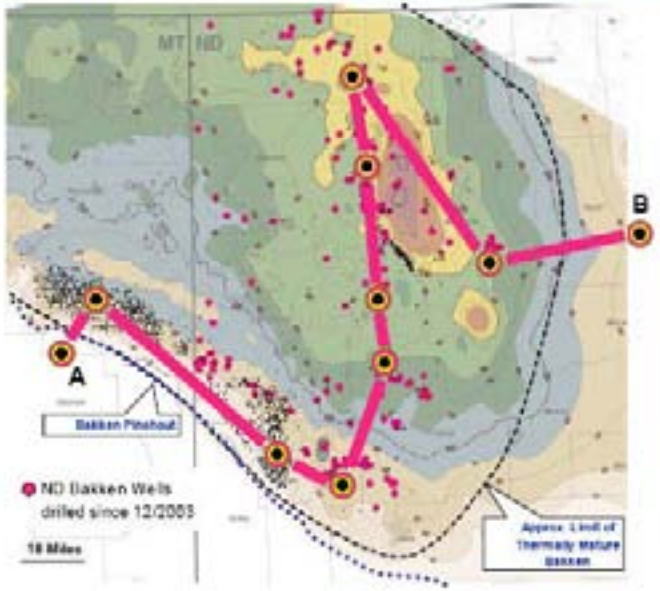
Bakken Play Overview in 2009

In June 2009, when the horizontal Bakken Play in North Dakota was still fairly young, Ammonite evaluated the acreage of a company in the Bakken Play on behalf of a private equity investor. The client wanted to understand the Bakken and whether the company in which it was considering making an investment had leases within a “sweet spot” within the Bakken. The following pages comprise our review.

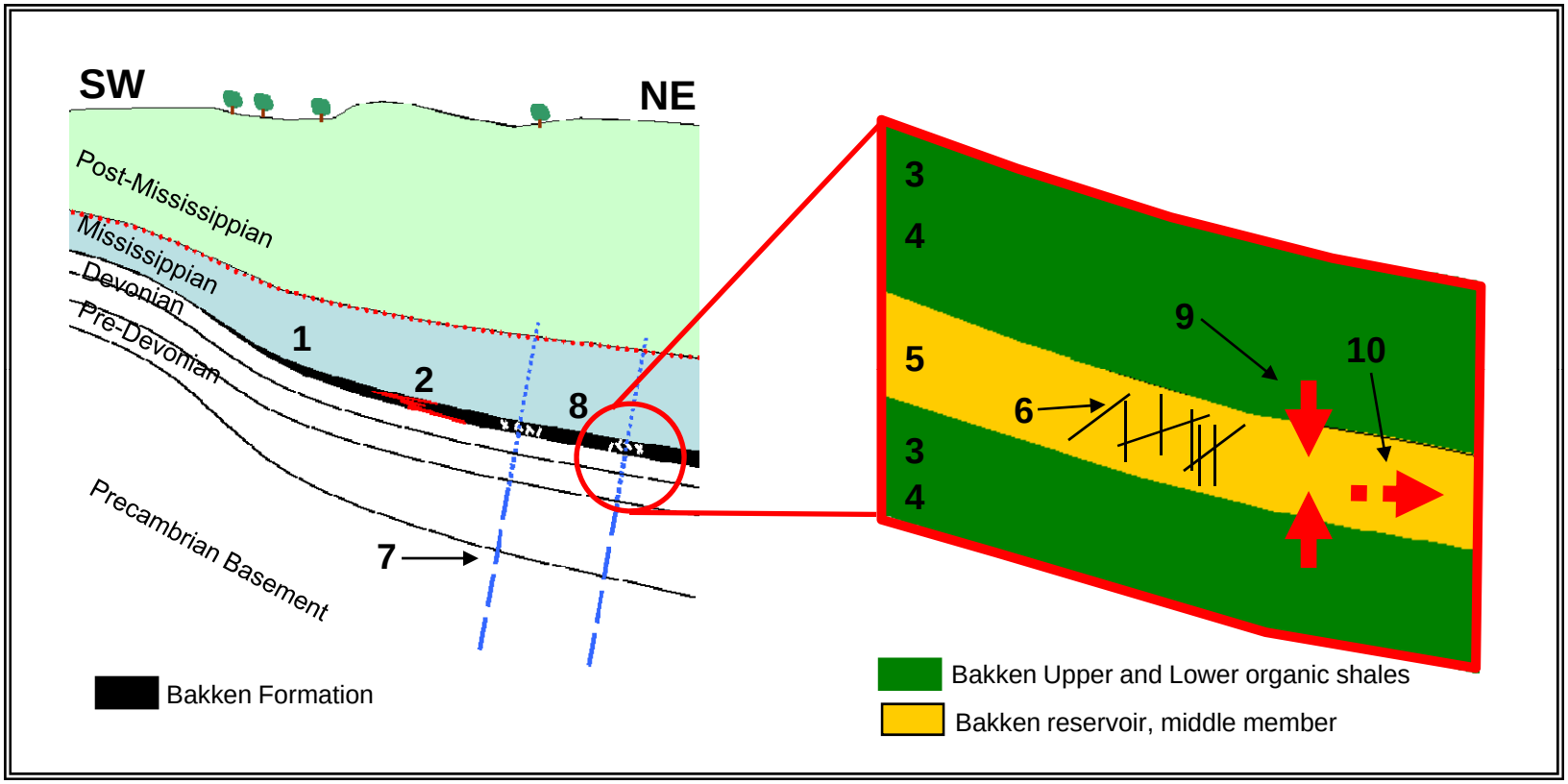
Bakken Formation in the Williston Basin



- Over-pressured, oil bearing rock
- Both source and reservoir for the oil
- Three members (Upper, Middle, Lower)
- Upper Shale
  - Highly organic (up to 20% TOC)
  - Brittle due to high silica content
  - Max 28' thick
- Middle Member
  - Varies from dolomite, sand, shaley lime and shale across the basin
  - Porosity is low, averaging 5%
  - Max 87' thick
- Lower Shale
  - Similar to Upper Shale
  - Max 55' thick
- Micro fractured due to oil generation
- Macro fractured locally due to tectonics
- Depths 8,500'-11,000'

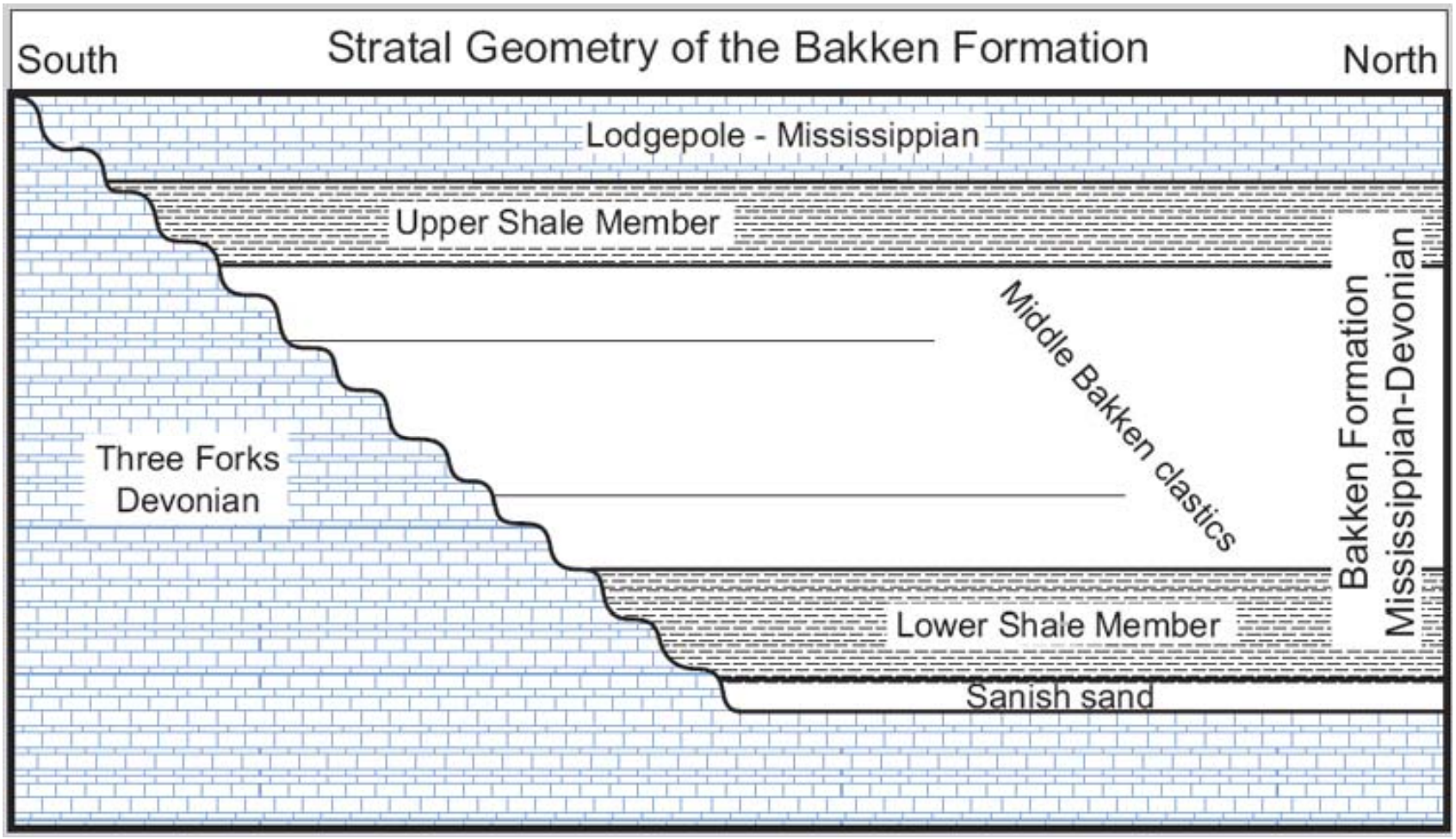


The Bakken play in 10 key points

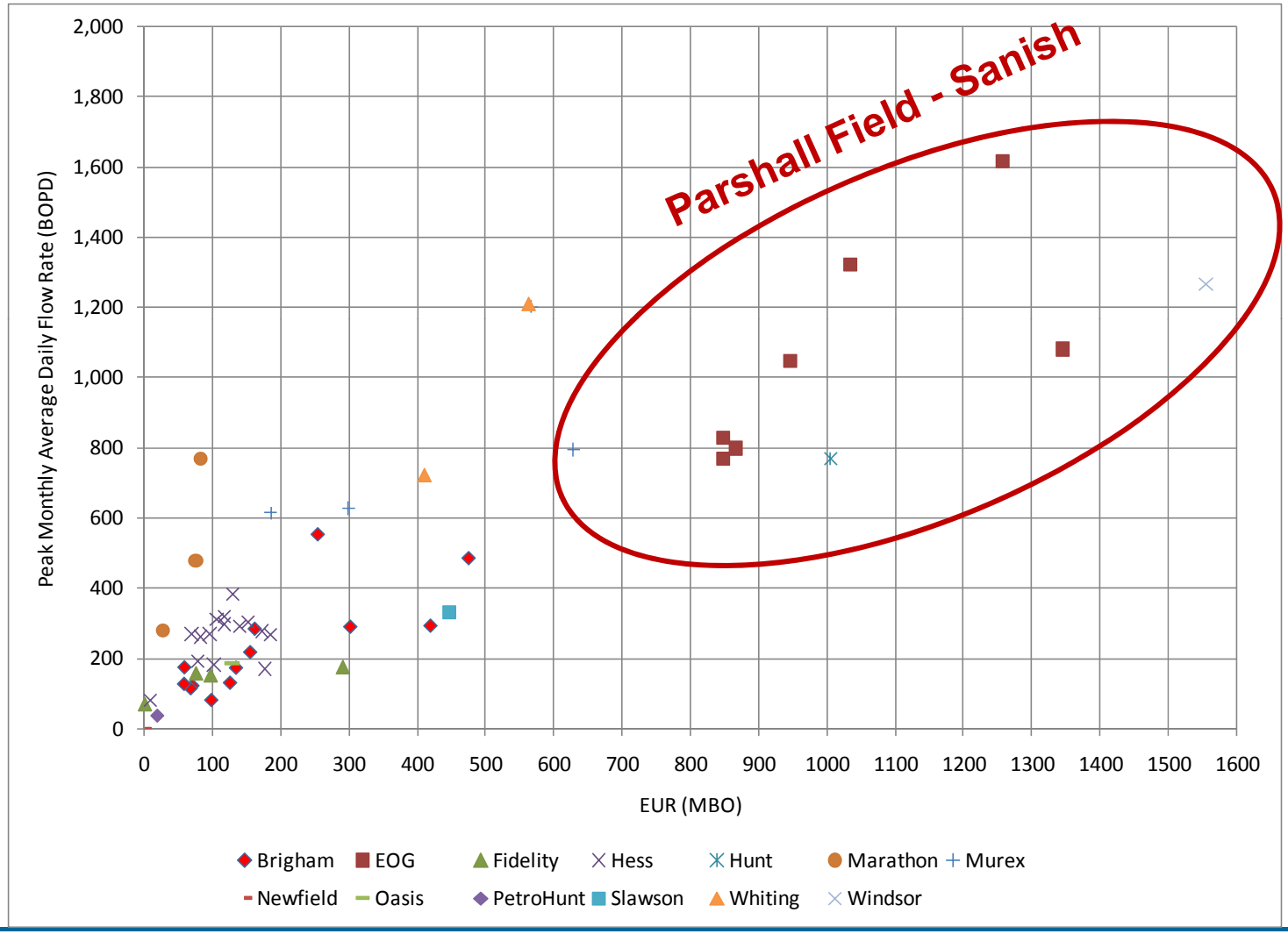


A) Trap. Deposition geometry (1), together with lateral permeability barriers (2) permitted the formation of a continuous oil accumulation in the Bakken
B) Seal. Upper and lower shales acted as an effective vertical seal (3)
C) Source. The high organic content of the upper and lower shales (4) favoured the generation and expulsion of oil into the middel member
D) Reservoir. The very-fine sandstone of the middle member (5) constituted the reservoir. Permeability, originally very-low, is enhanced mainly by natural fracturing (6). Natural fracturing occurred mainly as a response to the reactivation of basal structures (7)
E) Timing and migration. Subsidence and the thermal gradient provoked the maturation of the organic shales of Bakken in the center of the basin (8) Primary migration filled up the middle member (9) . Lateral migration was very limited (10). However, it permitted the accumulation of oil within the Bakken on the Canadian side of the basin and the migration of Bakken oil to the Madison group.

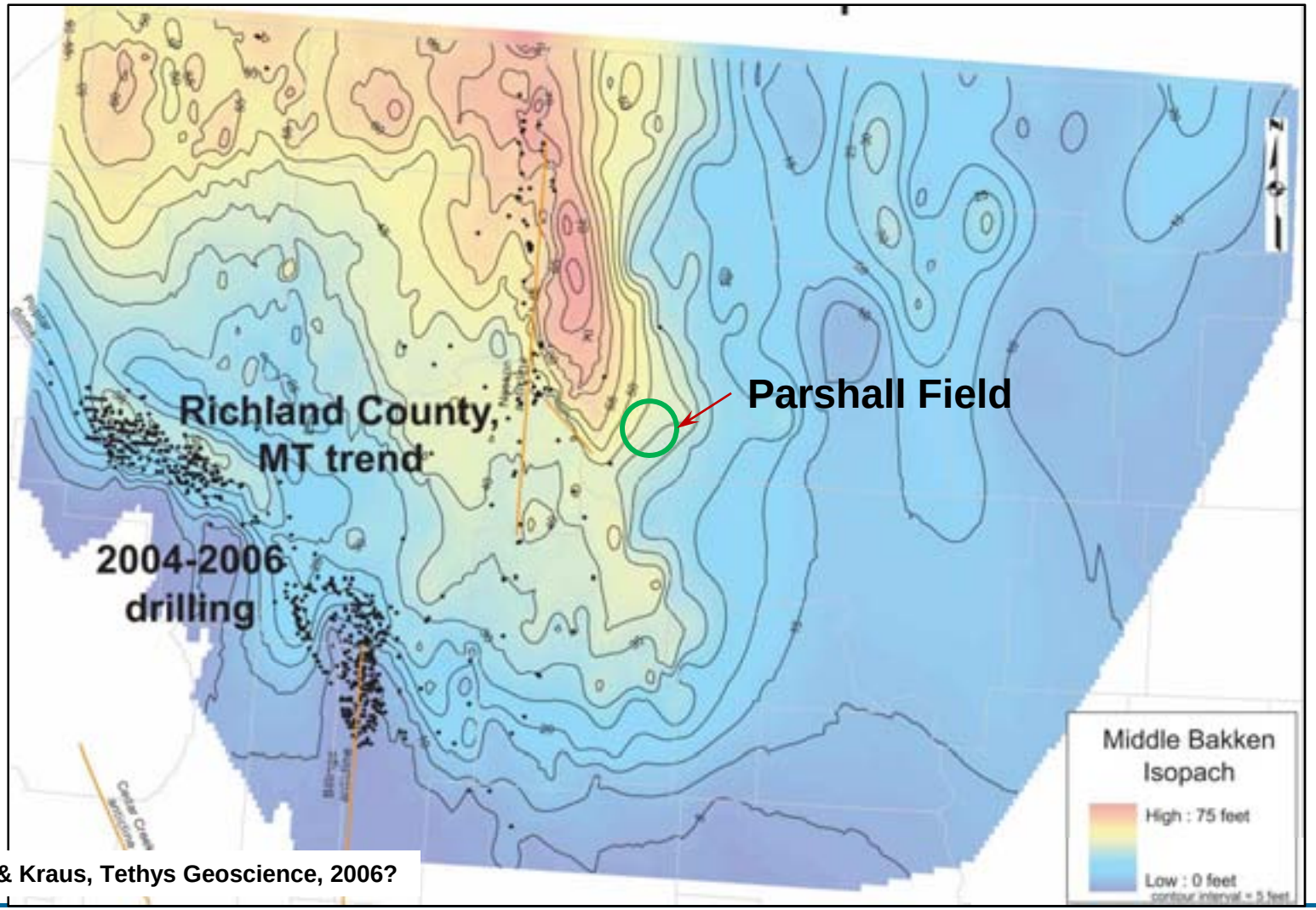
Bakken Formation Stratigraphy



Peak Average Daily Rate vs. EUR by Company

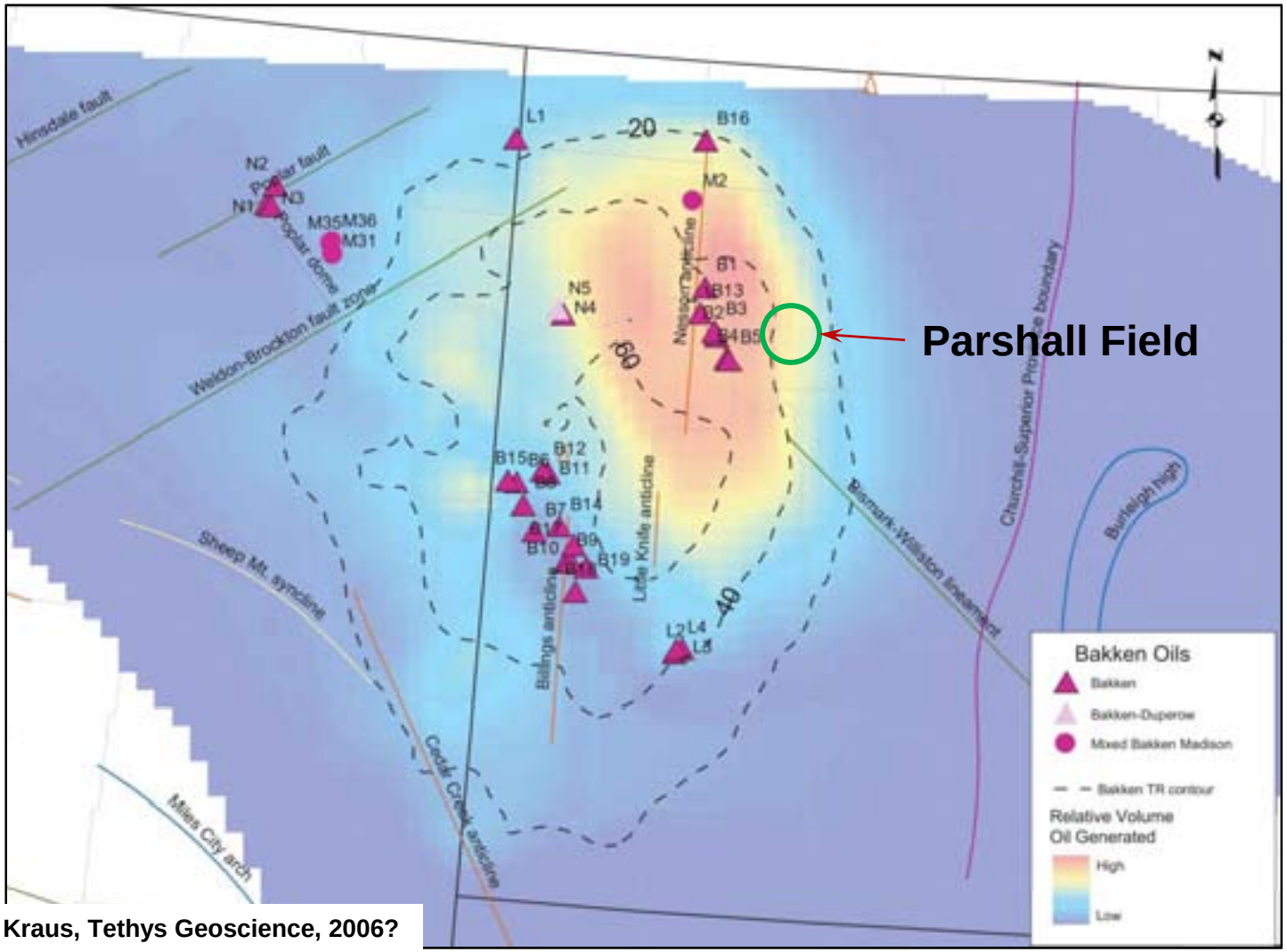


Middle Bakken Isopach



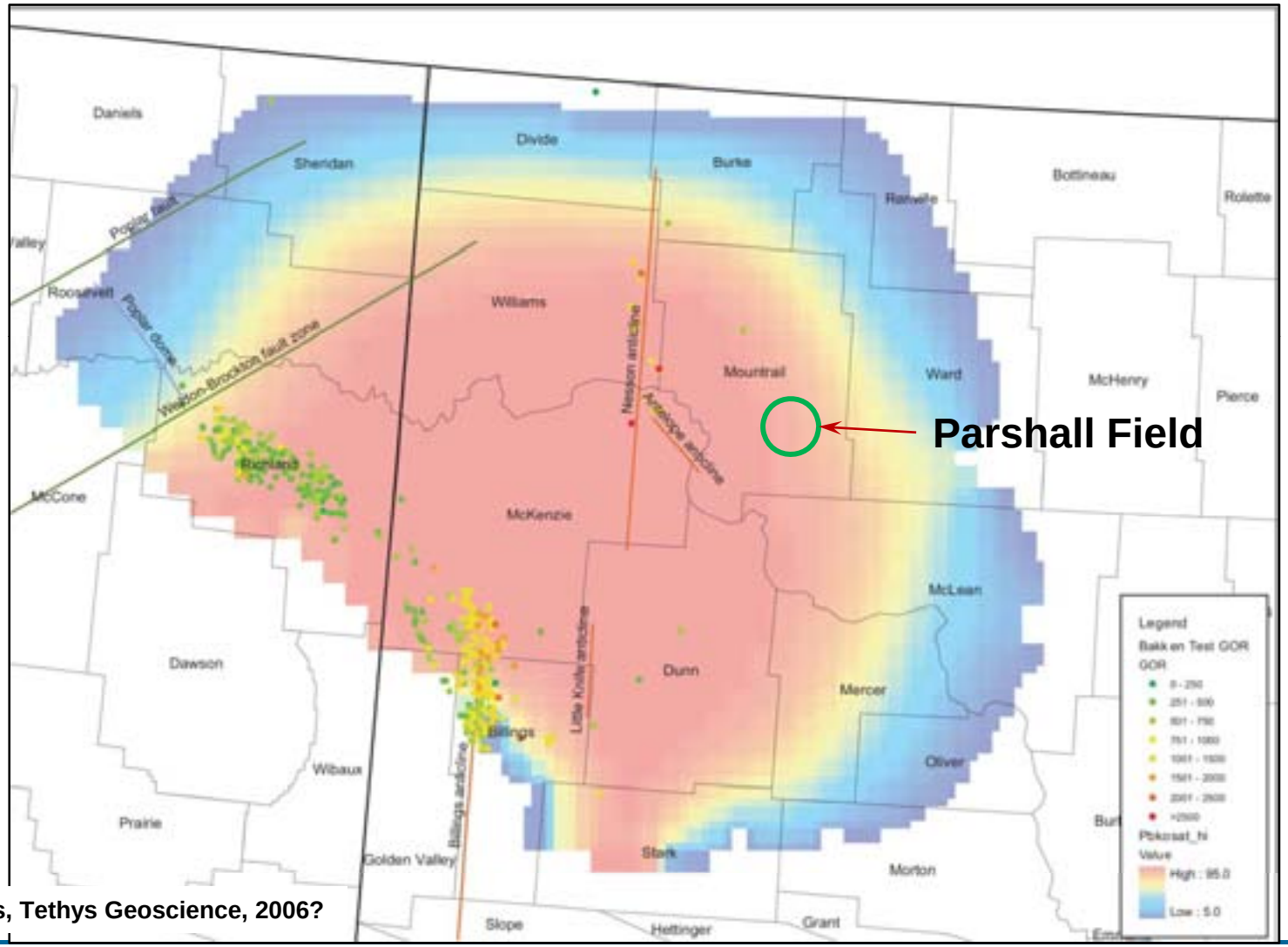
Flannery & Kraus, Tethys Geoscience, 2006?

Bakken: Relative Oil Generated



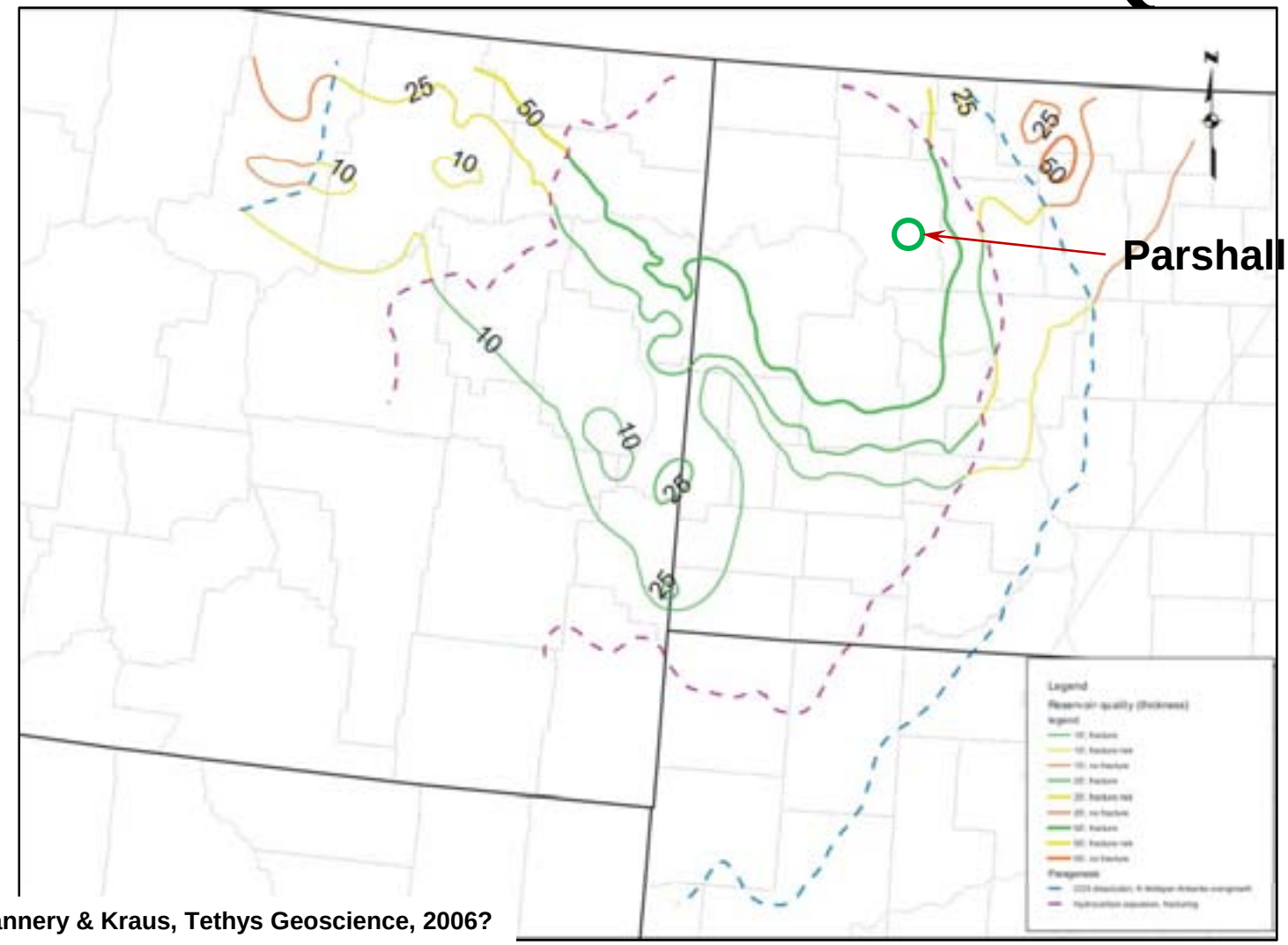
Flannery & Kraus, Tethys Geoscience, 2006?

Middle Bakken Oil Saturation



Flannery & Kraus, Tethys Geoscience, 2006?

Middle Bakken Reservoir Quality



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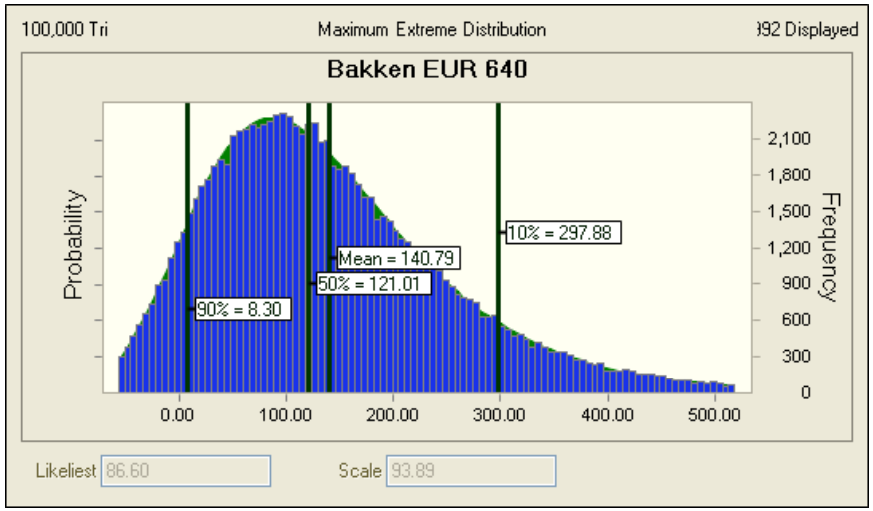
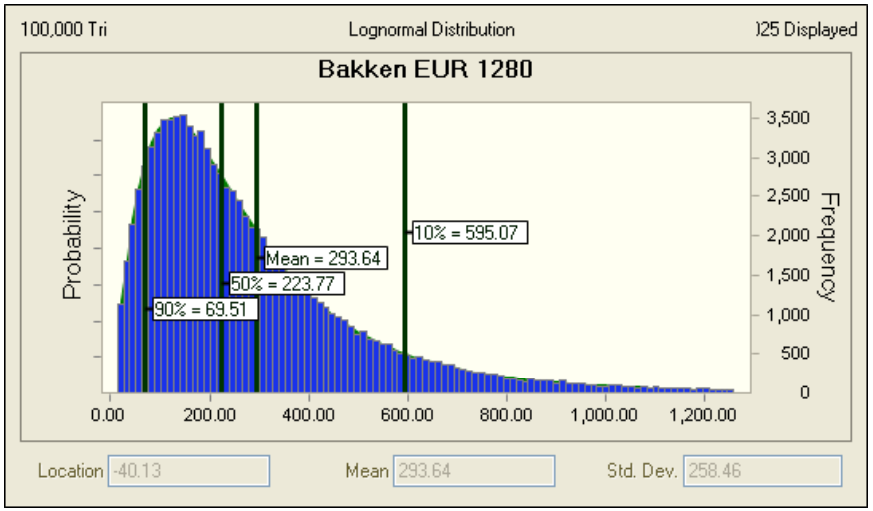
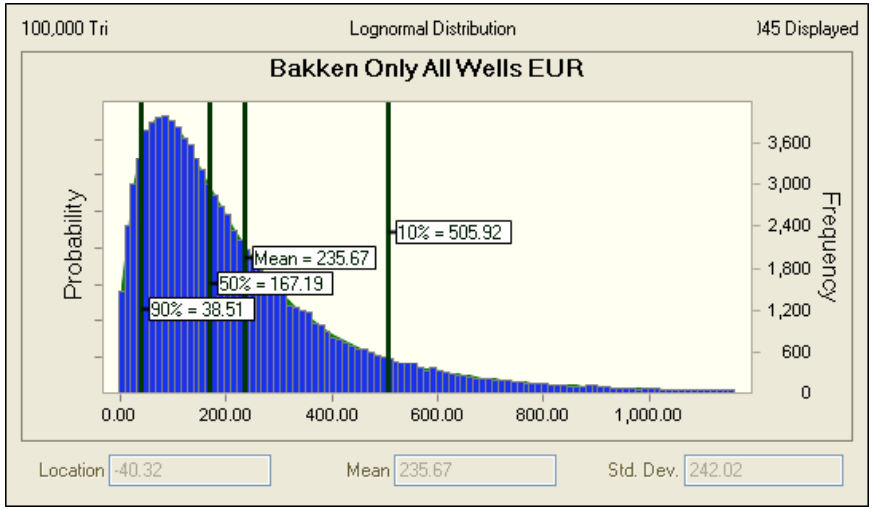
EUR in MBO Compared by Unit Size

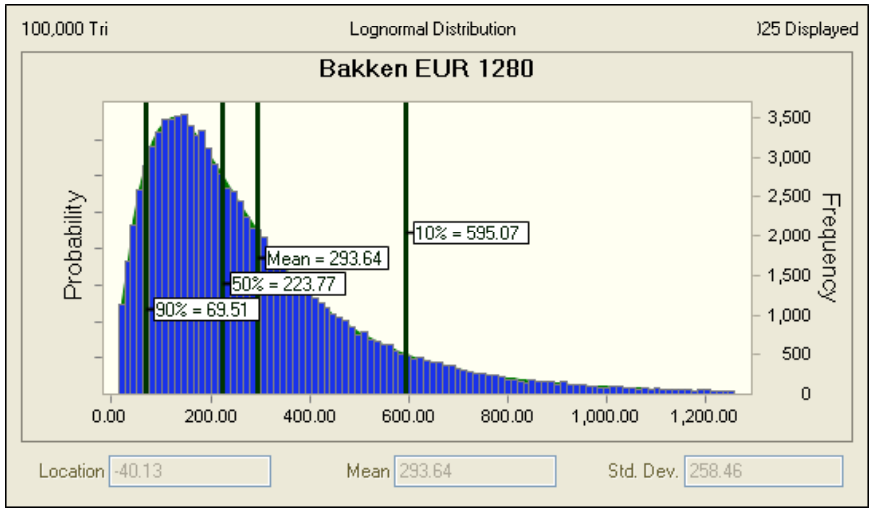


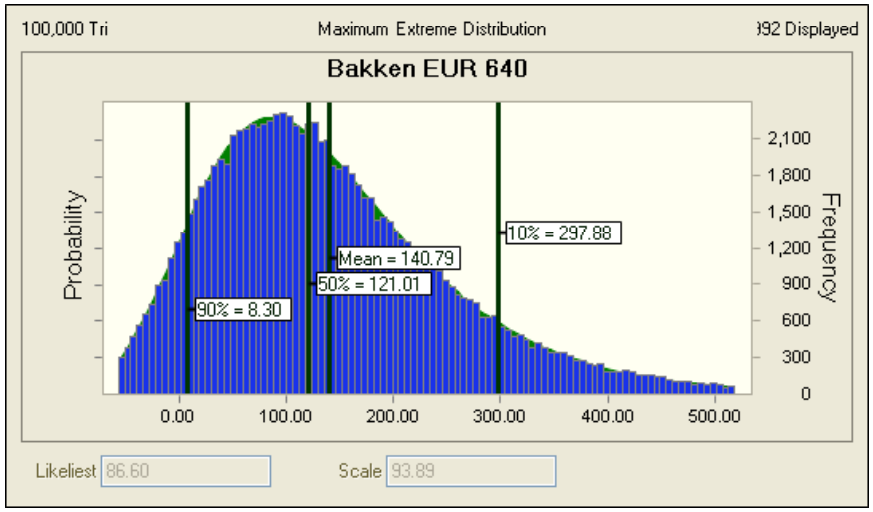


Bakken Only EUR in MBO

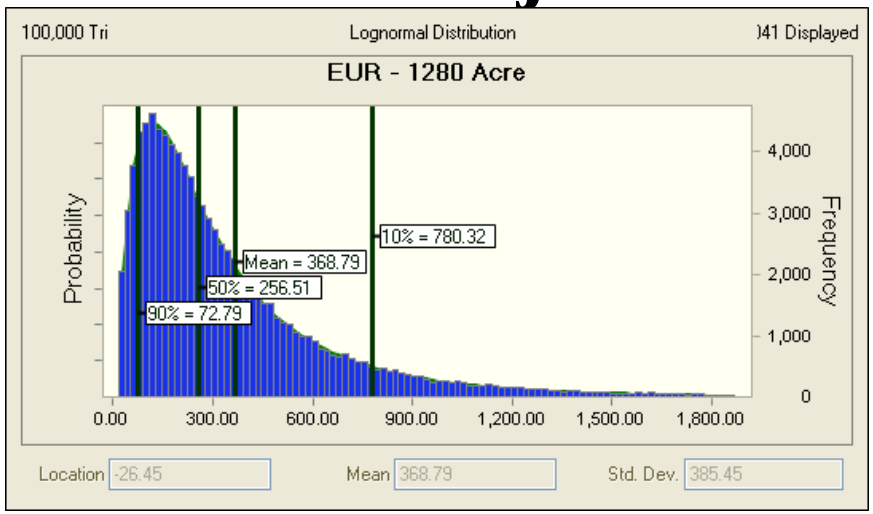


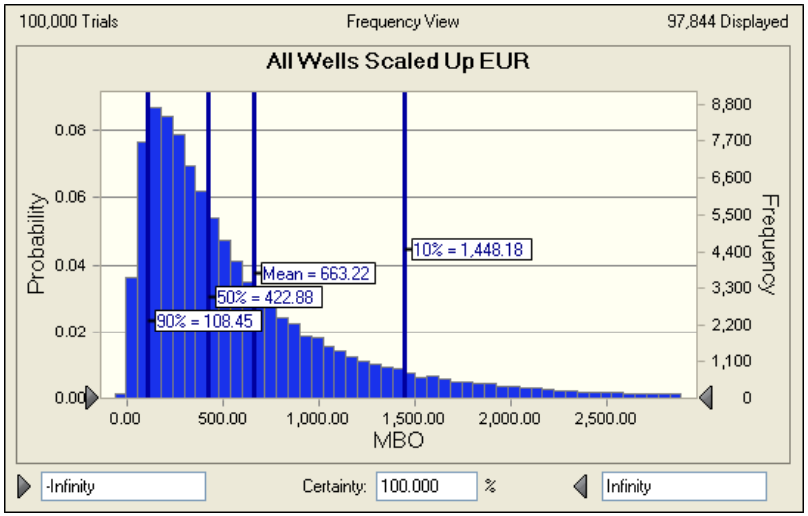
Excludes Parshall Field

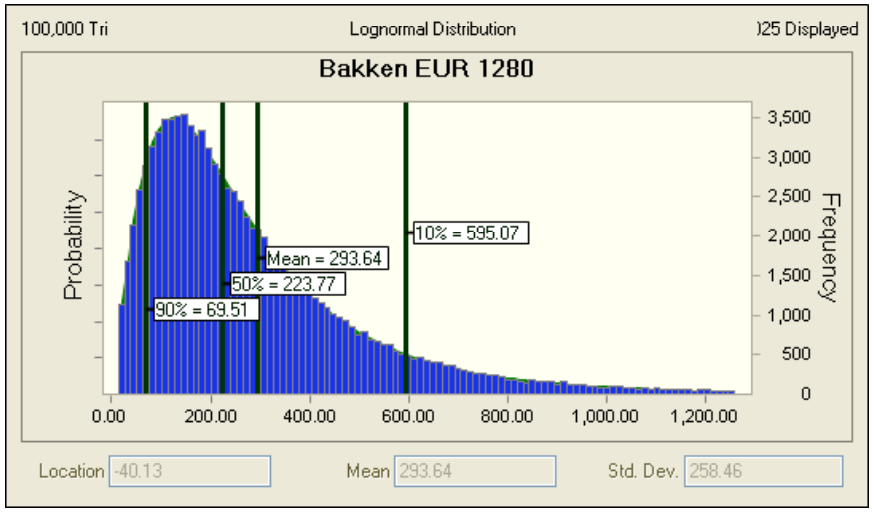


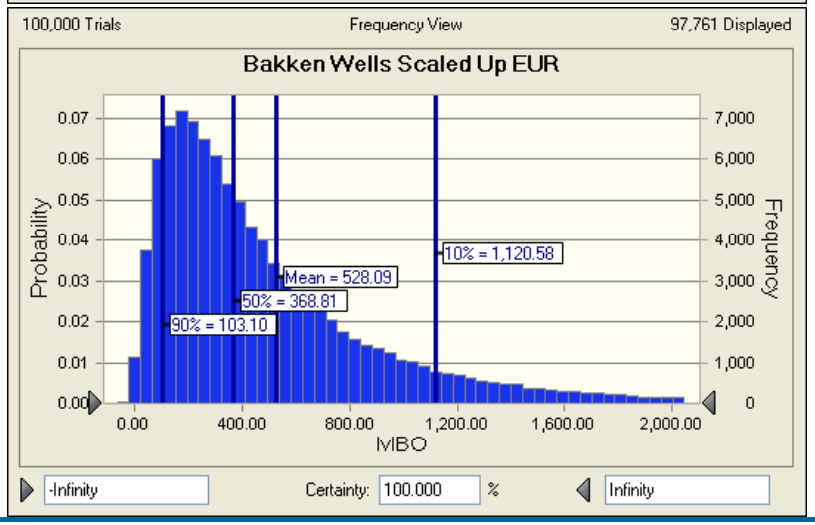


EUR in MBO for Existing Wells and Projections: 1280 Acre Units

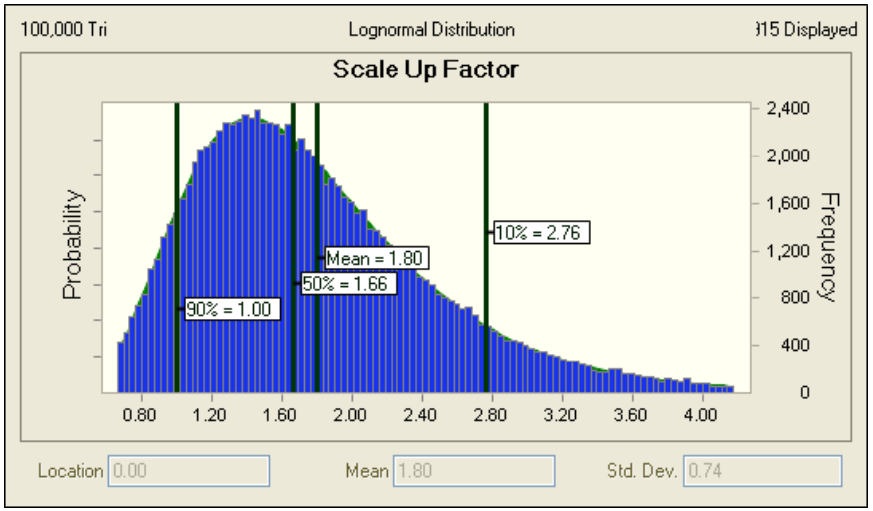


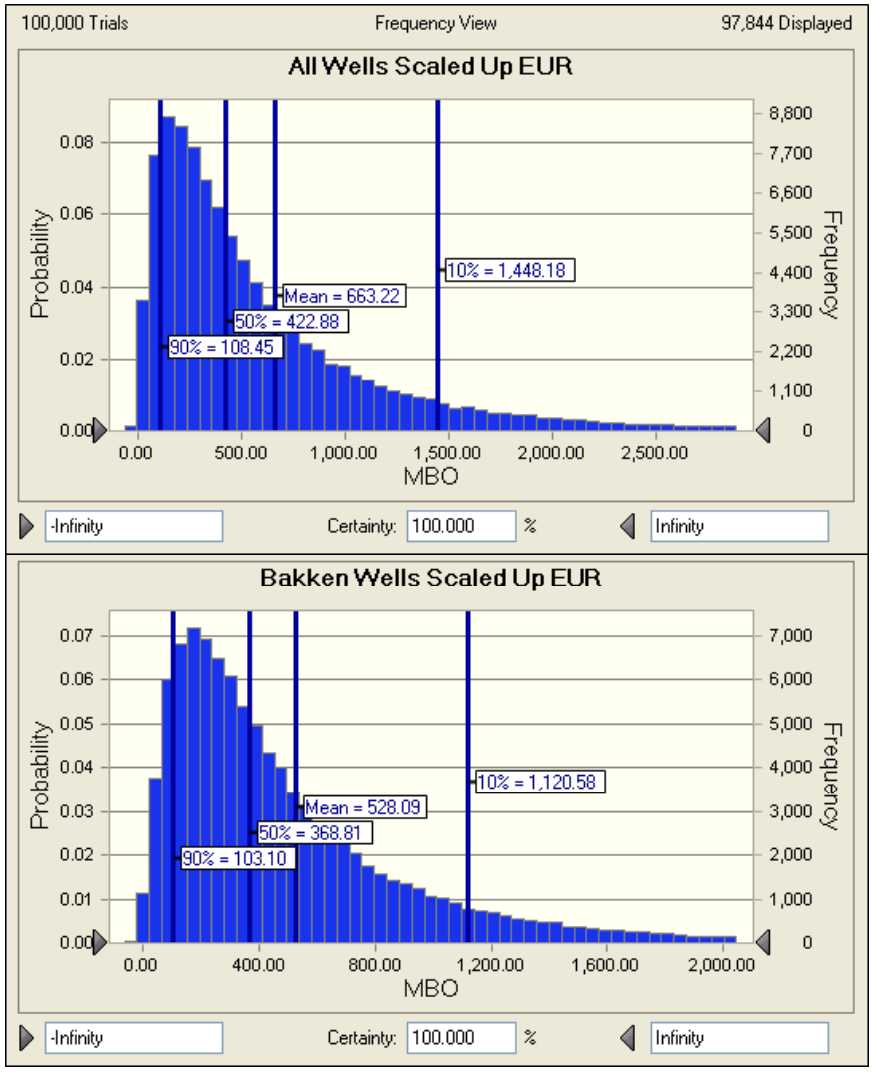




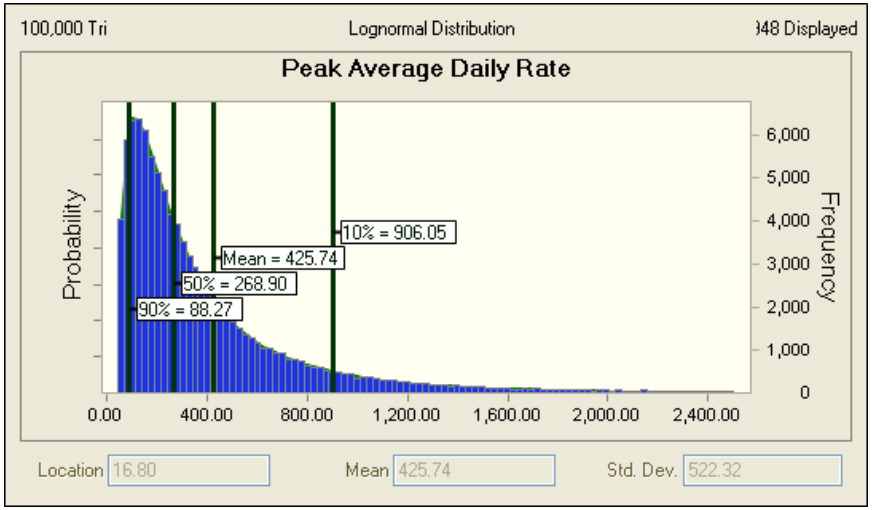


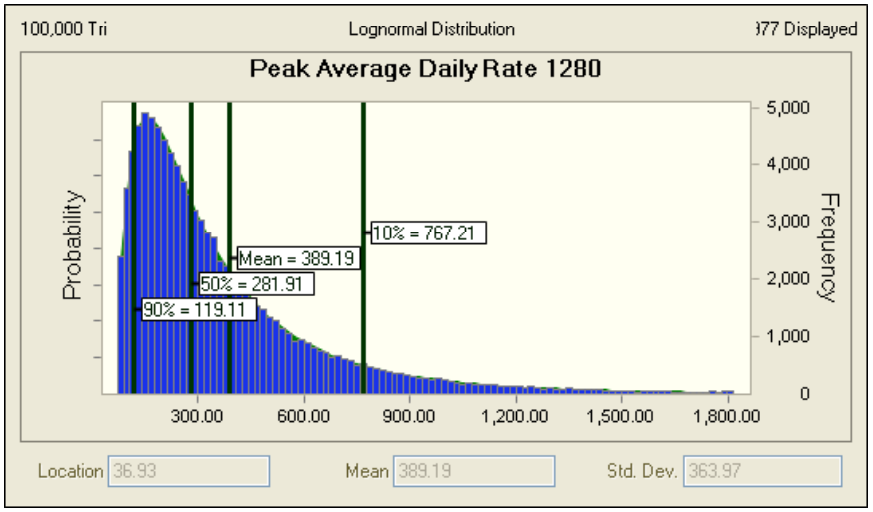
Resource Potential in MBO for Wells with 20+ Fracs

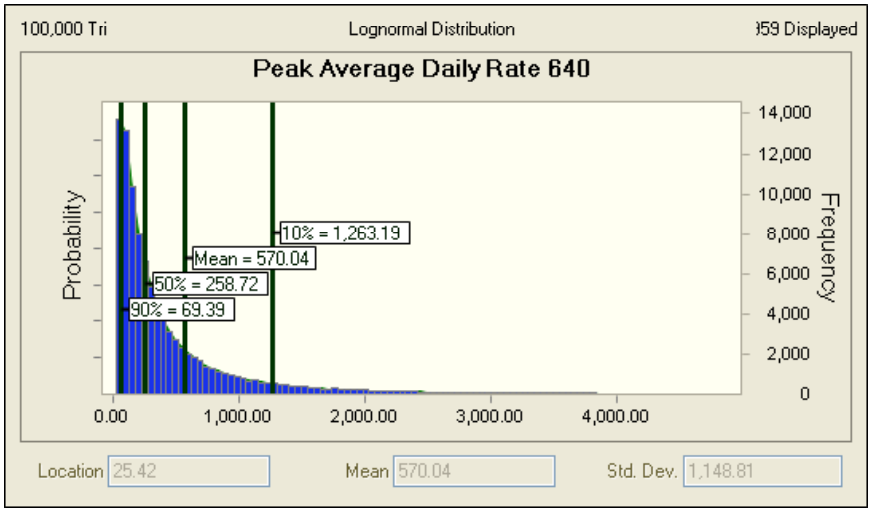




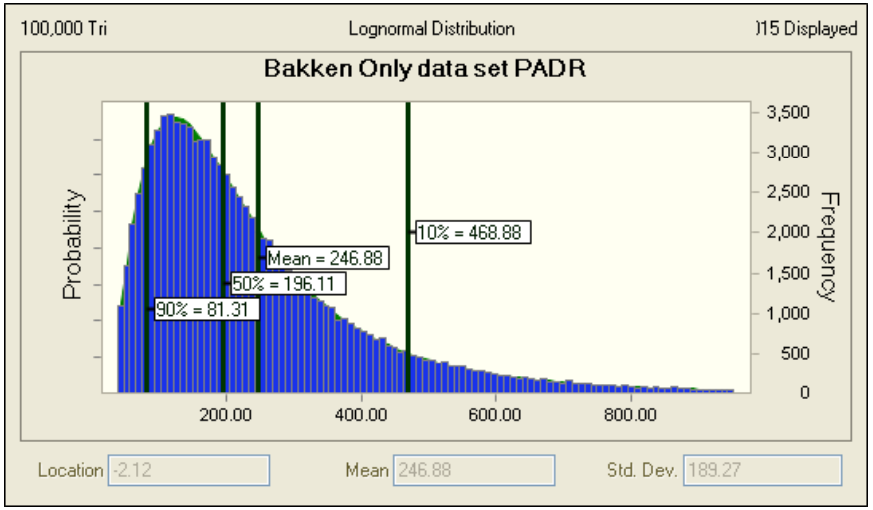
All Wells Peak Monthly Average Daily Rate



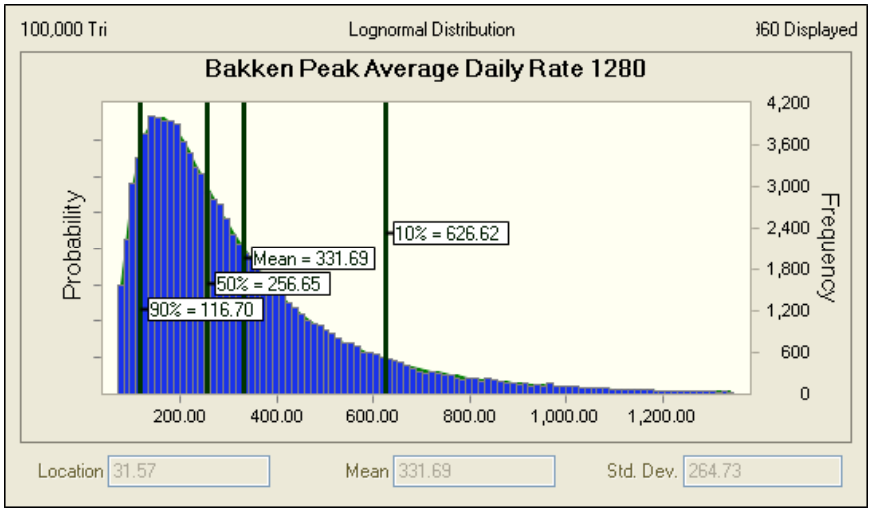


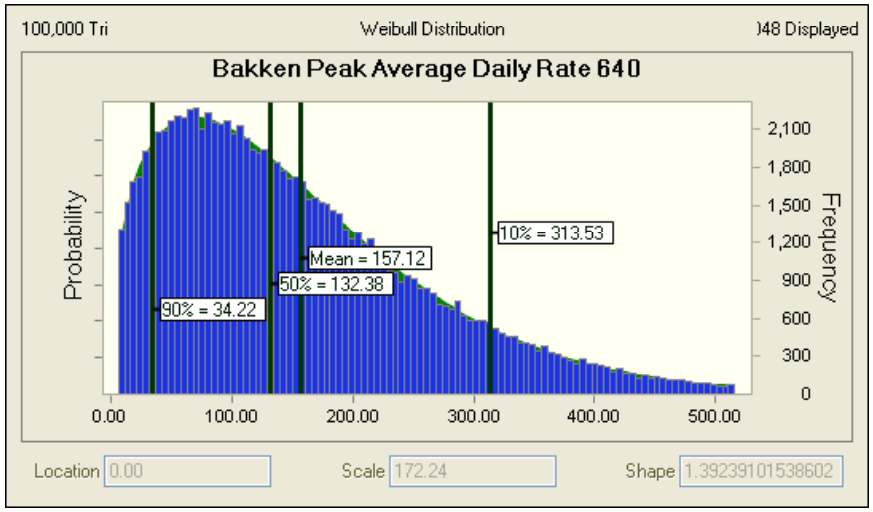


Bakken Only Peak Average Daily Rate

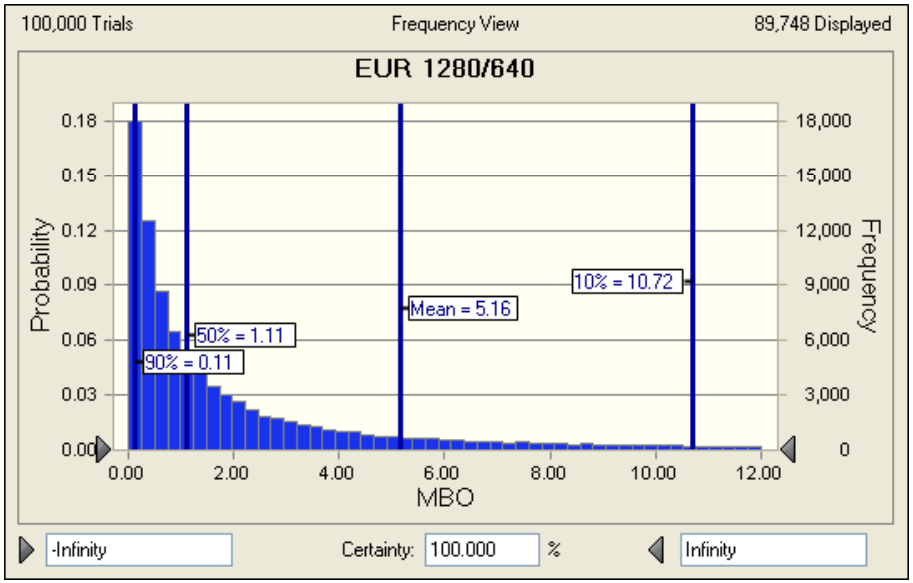


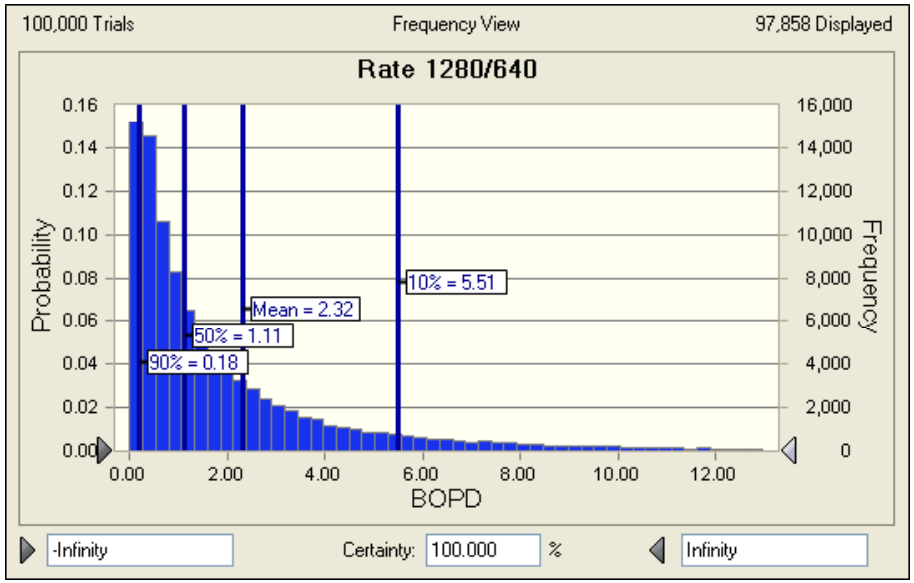
Excludes Parshall Field



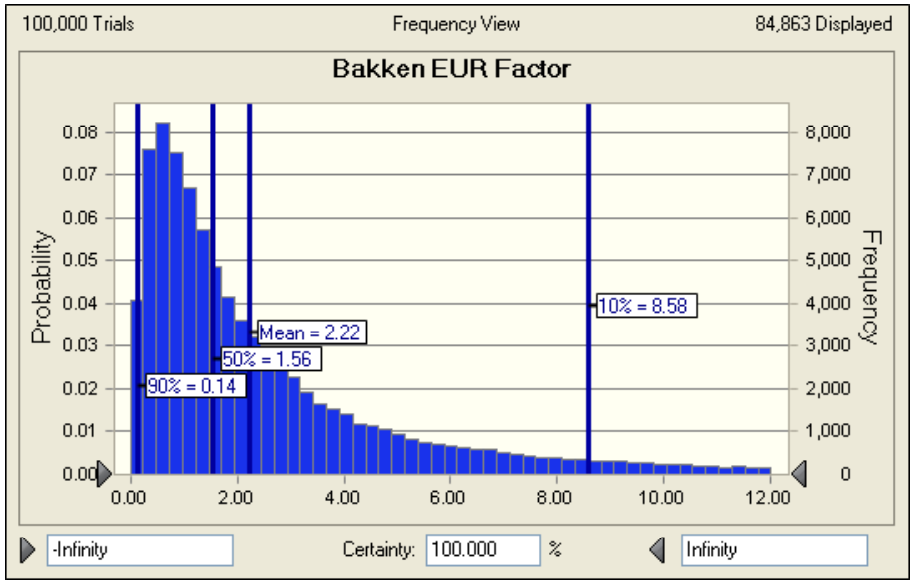


All Wells 1280/640 Factor

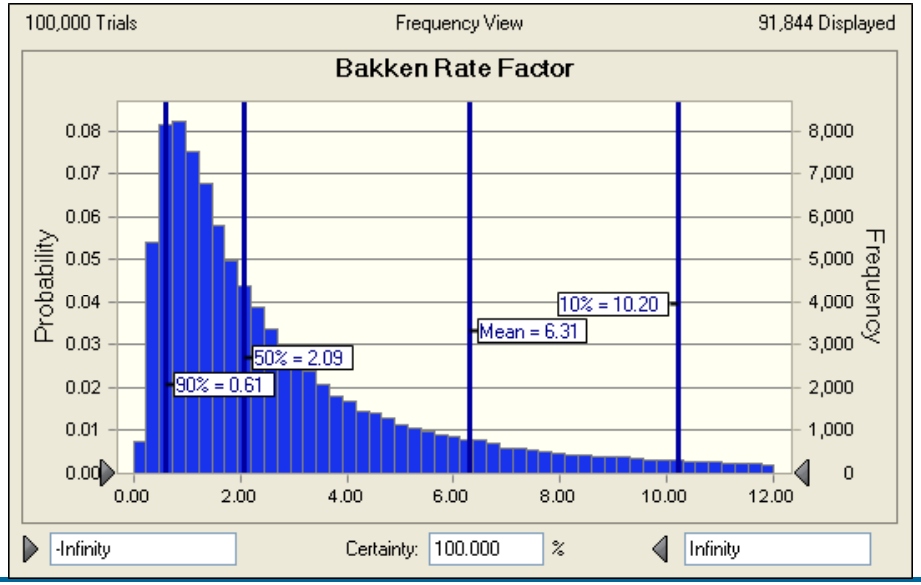




Bakken Only 1280/640



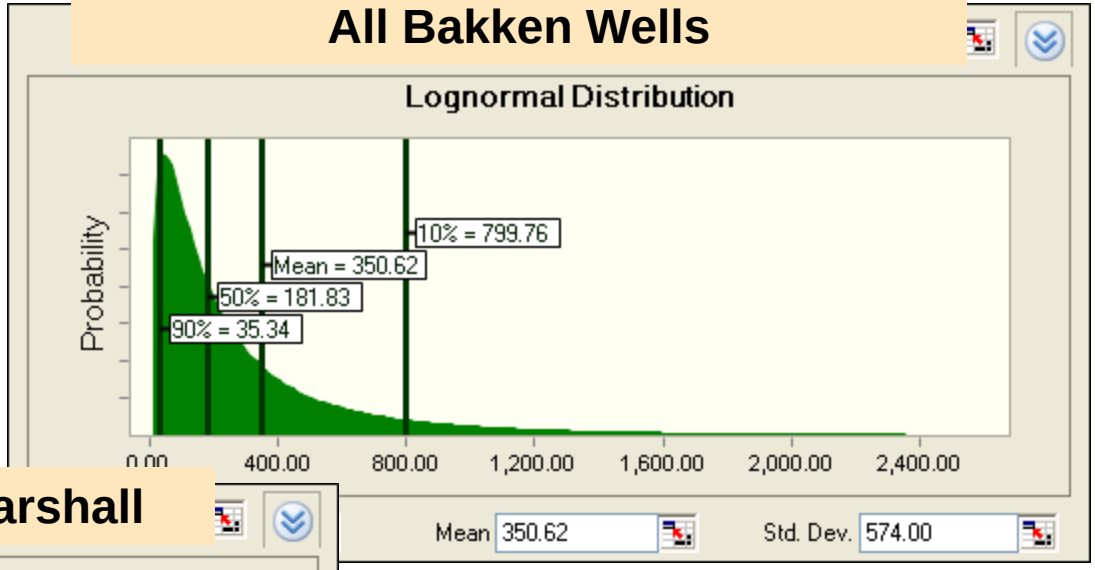
Excludes Parshall Field



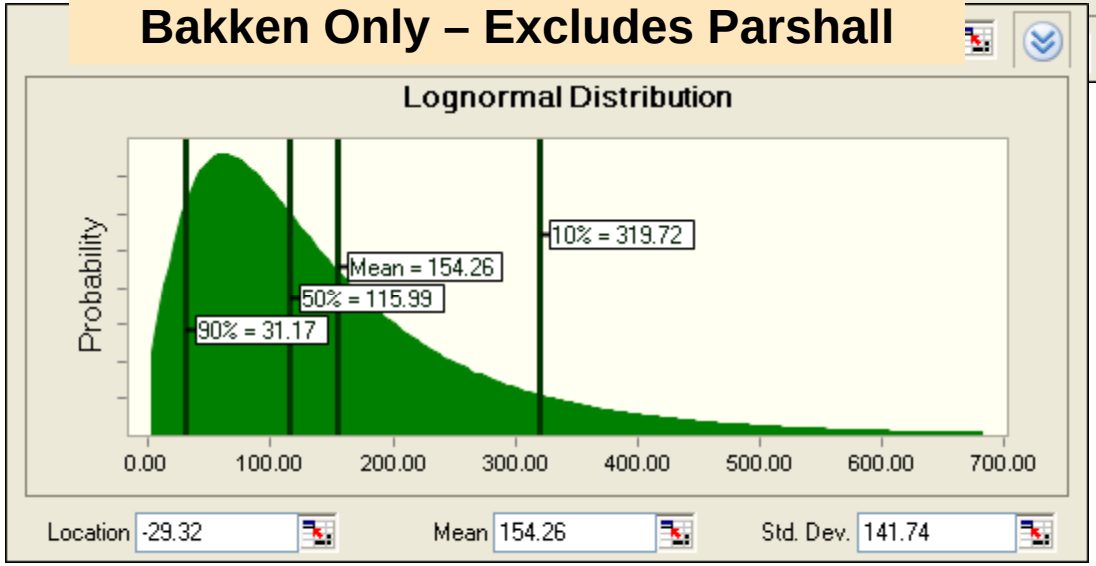
Normalized EUR

All EUR's normalized to 640 acre spacing

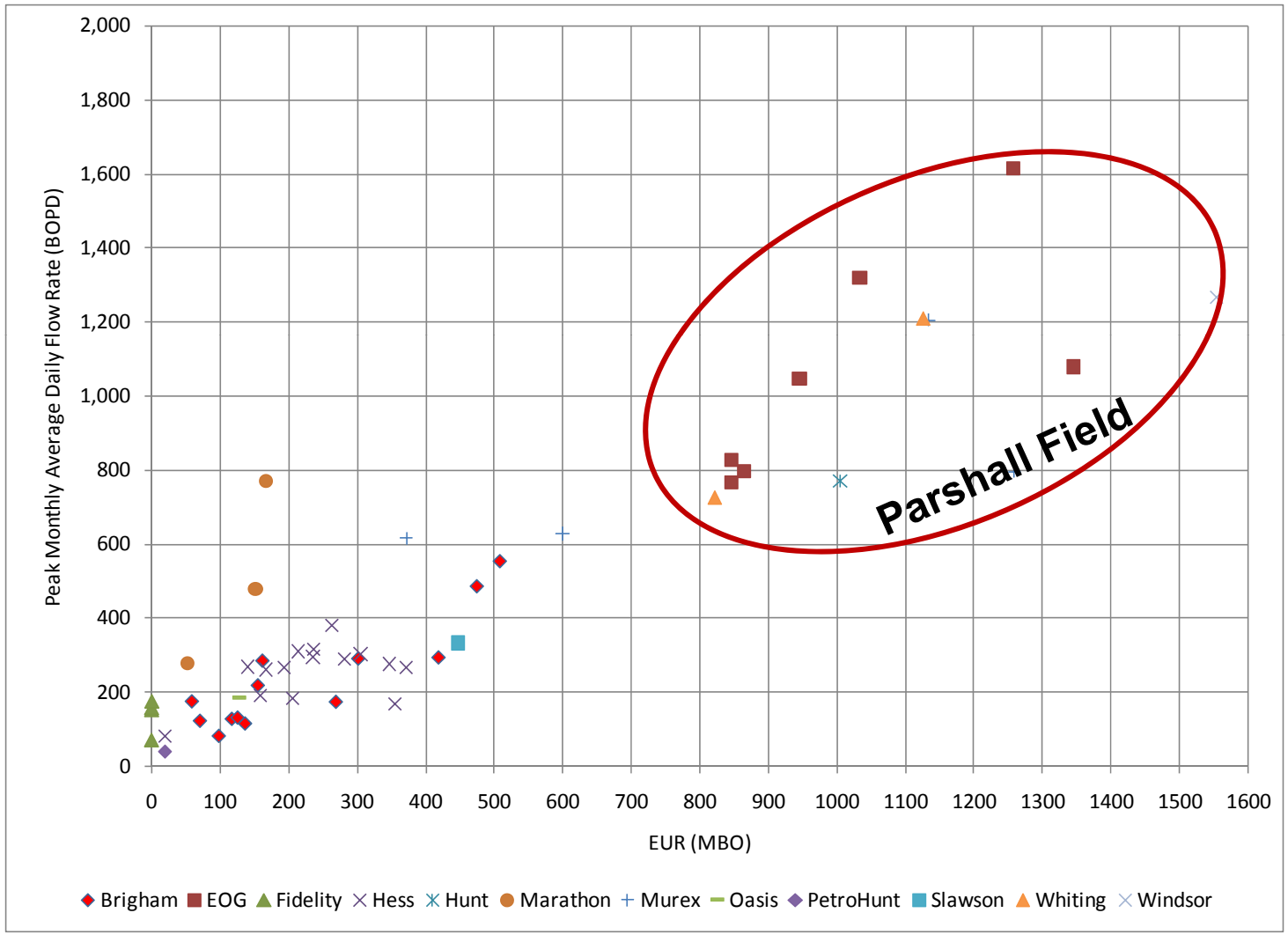
All Bakken Wells



Bakken Only – Excludes Parshall



Peak Average Daily Rate vs. Oil/640 ac



Peak Average Daily Rate vs. EUR by Spacing