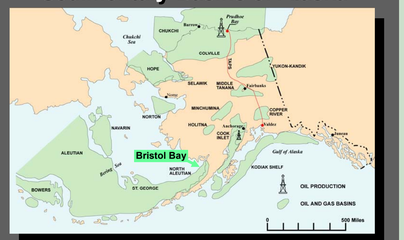
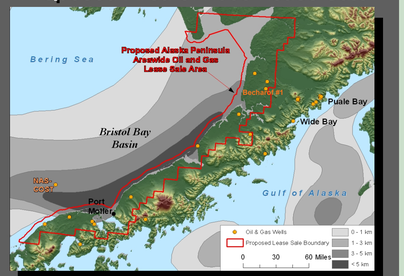
Reservoir Quality of Tertiary & Mesozoic Sandstones, Bristol Bay Basin, Alaska

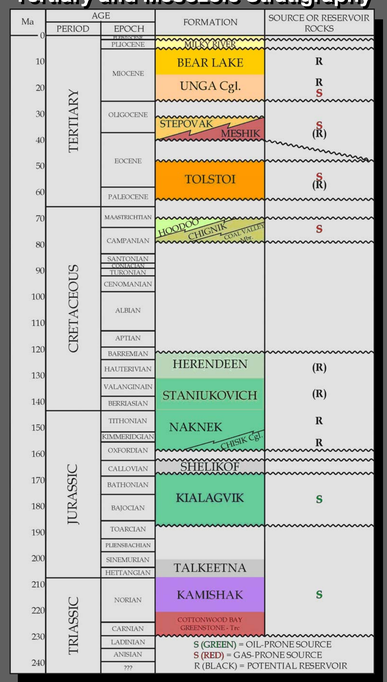
Sedimentary Basins of Alaska



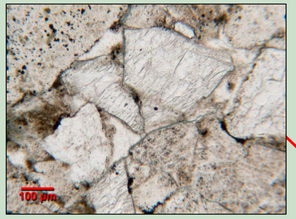
Proposed Area of 2005 Lease Sale



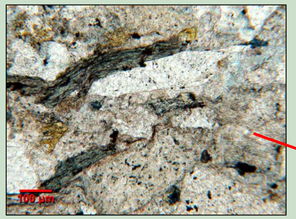
Tertiary and Mesozoic Stratigraphy



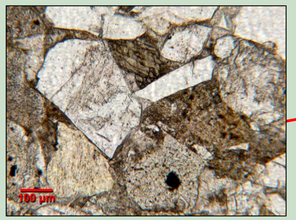
Non-reservoir Sandstones



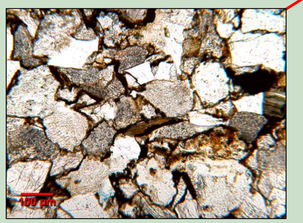
Outcrop
Naknek Fm.
Φ = 6.3 %; K = 3.38 md



Amoco Becharof State #1
7915.0' MD; Stepovak Fm.
Φ = 7.1 %; K = 0.12 md

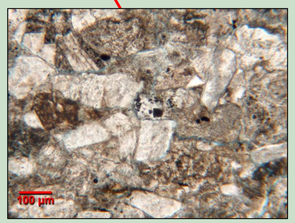


Outcrop
Shelikof Fm.
Φ = 3.6 %; K = 0.01 md

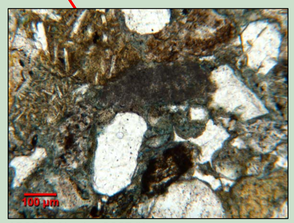


Outcrop
Herendeen Fm.
Φ = 4.6 %; K = 0.004 md

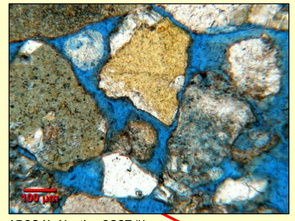
Outcrop
Tolstoi Fm.
Φ = 7.0 %; K = 0.005 md



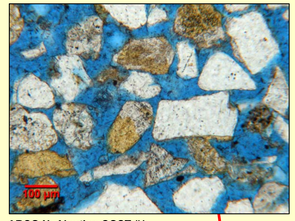
Outcrop
Kialagvik Fm.
Φ = 9.7 %; K = 0.005 md



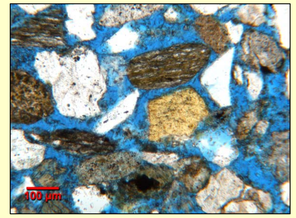
ARCO N. Aleutian COST #1
9957.5' MD; Stepovak Fm.
Φ = 17.2%; K = 0.87 md



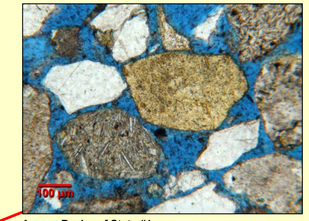
ARCO N. Aleutian COST #1
8635.0' MD; Stepovak Fm.
Φ = 31.4 %; K = 709 md



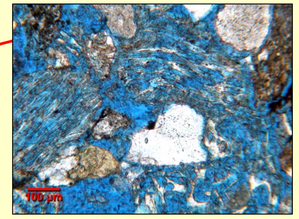
ARCO N. Aleutian COST #1
8087.0' MD; Stepovak Fm.
Φ = 32.9 %; K = 2358 md



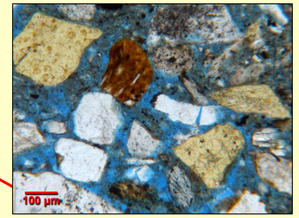
ARCO N. Aleutian COST #1
5234.0' MD; Unga Fm.
Φ = 34.2 %; K = 1607 md



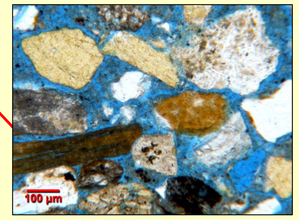
Amoco Becharof State #1
2734.5' MD; Milky River Fm.
Φ = 36.9 %; K = 3470 md



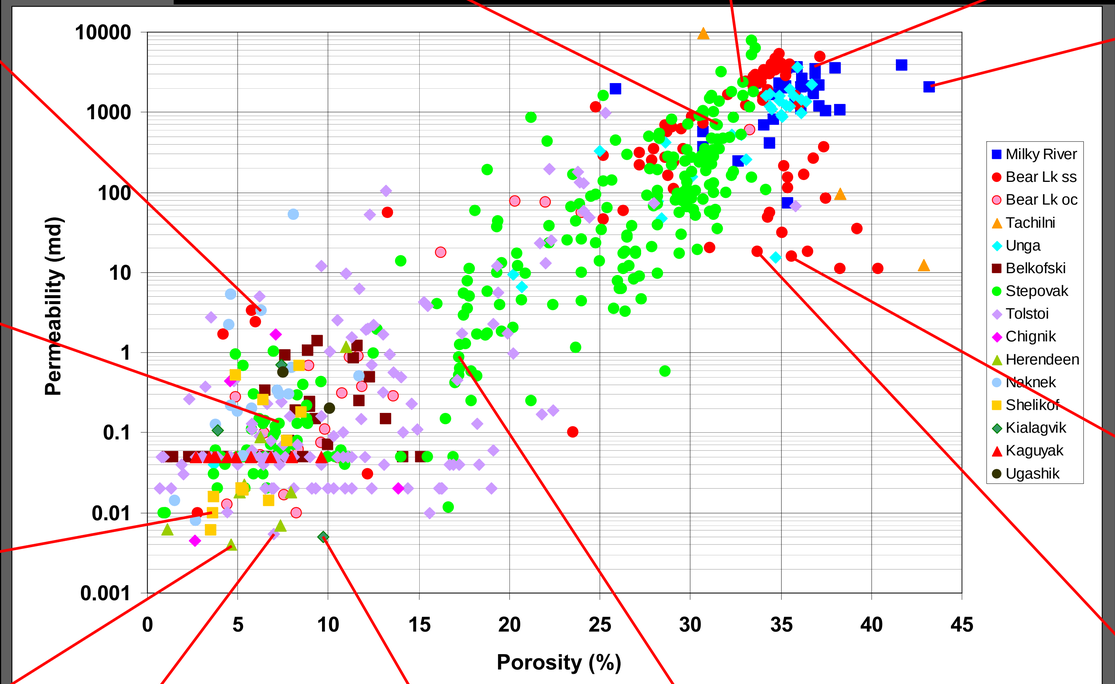
Amoco Becharof State #1
2726.5' MD; Milky River Fm.
Φ = 43.2 %; K = 2040 md



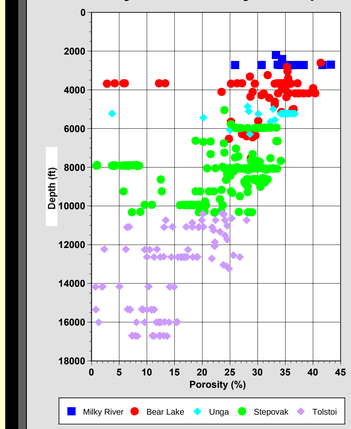
ARCO N. Aleutian COST #1
4197.0' MD; Bear Lake Fm.
Φ = 35.6 %; K = 16 md

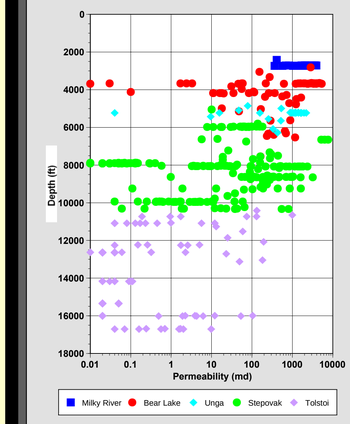


ARCO N. Aleutian COST #1
4198.0' MD; Bear Lake Fm.
Φ = 33.7 %; K = 18 md



Porosity/Permeability vs Depth





Reservoir Sandstones

- High quality in Mio/Pliocene
- Minor cementation and compaction
- Fine grained to conglomeratic
- High to moderate quartz component
- Low Dmax

Non-reservoir Sandstones

- Mostly Eocene and older
- High volcanic component
- Arkosic composition
- Zeolite cementation
- Severe compaction
- High Dmax

Reservoir Sandstones

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