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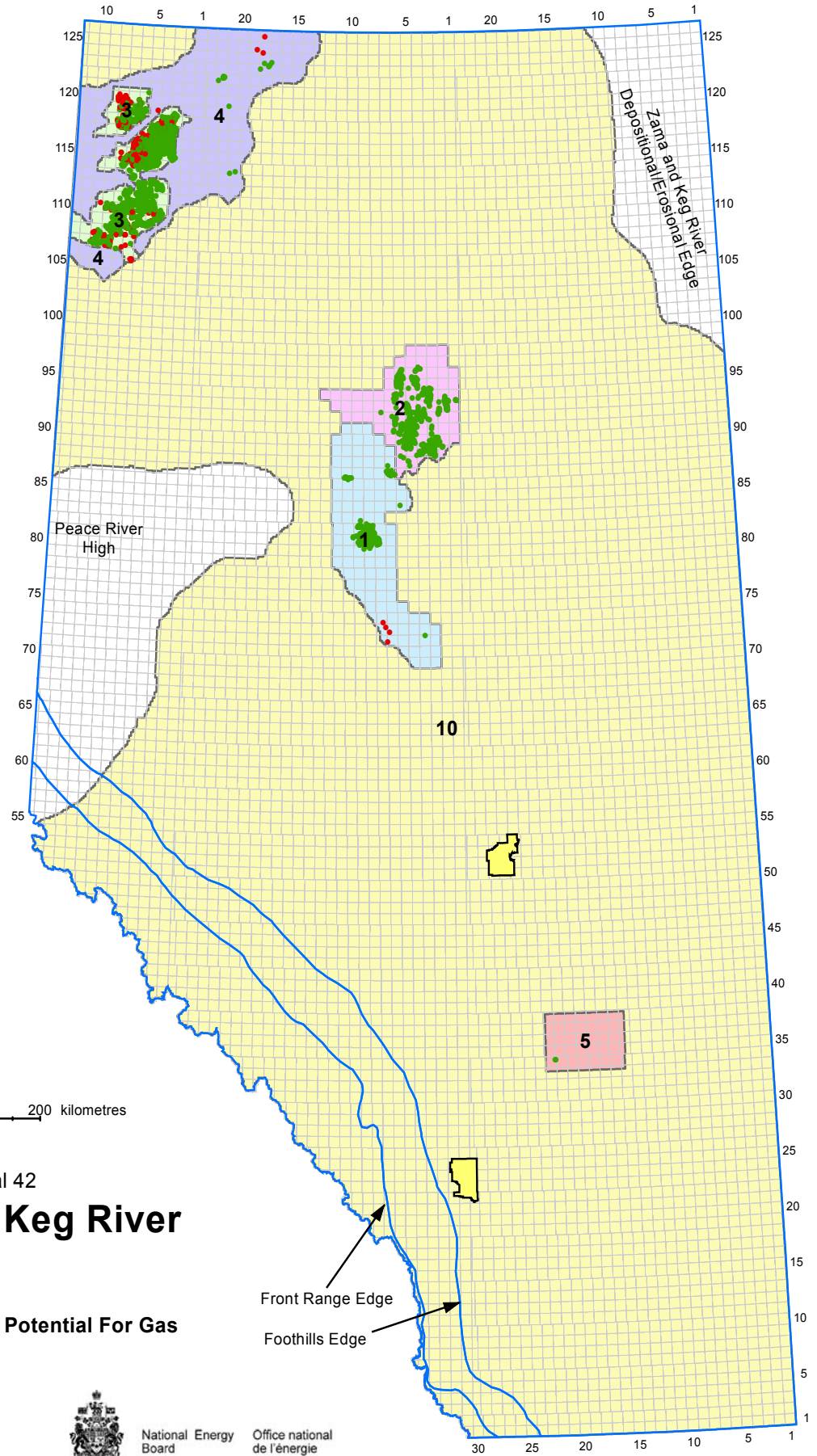
Stratigraphic Interval 42

Zama and Keg River

EUB/NEB Ultimate Potential For Gas
(June 2005)



National Energy Board
Office national de l'énergie



Zama and Keg River Interval

Number of Play Areas – 5

Interval Boundary – Zama and Keg River Depositional/Erosional Edge

Geological Revisions from EUB *Report 92-A*

The Zama and Keg River have been separated from the Gilwood and Granite Wash for this study. Five play areas have been created for the Zama and Keg River. Play areas 3 and 4 in northwestern Alberta remain similar to the play areas in *Report 92-A*, with play areas 1 and 2 being created within the area where overlap with the Gilwood and Granite Wash occurred. A fifth play area to encompass the Winniepegosis in south-central Alberta was added to account for current discoveries and future potential.

Play Area 1 – Keg River Sand - Utikuma Lake

- Largest pool – Utikuma Lake Keg River Sand A (GIP = $992 \times 10^6 \text{ m}^3$, area = 26 sections).
- Number of discovered pools – 66.
- The play area is defined by Keg River deposits of coarse-grained sandstone in a near-shore environment made up of eroded granitic material shed from the Peace River Arch.
- The medium-case undiscovered GIP for this play area is estimated to be $1350 \times 10^6 \text{ m}^3$.

Play Area 2 – Keg River Carbonate - Senex

- Largest pool – Senex Keg River A (GIP = $144 \times 10^6 \text{ m}^3$, area = 2.75 sections).
- Number of discovered pools – 191.
- This play area consists of carbonate mudstone and patch reefs deposited on a shelf margin or in a slightly deeper marine environment.
- The area is limited to the depositional extent of the reefs.
- The medium-case undiscovered GIP for this play area is estimated to be $1164 \times 10^6 \text{ m}^3$.

Play Area 3 – Pinnacles - Rainbow, Shekilie, and Zama Basins

- Largest pool – Rainbow Keg River F (GIP = $6700 \times 10^6 \text{ m}^3$, area = 7.50 sections).
- Number of discovered pools – 1158.
- The play area is characterized by a complex of patch, pinnacle, and drape traps within the Rainbow, Zama, and Shekilie Basins.
- The thin Muskeg and Zama dolomitized carbonates are deposited in a restricted marine to evaporitic environment and drape over the underlying Keg River.
- The medium-case undiscovered GIP for this play area is estimated to be $7950 \times 10^6 \text{ m}^3$.

Play Area 4 – Keg River - Bank

- Largest pool – Shekilie Keg River I2I (GIP = $352 \times 10^6 \text{ m}^3$, area = 0.25 sections).
- Number of discovered pools – 41.
- The play area is defined by the shallow marine carbonates adjacent to the Rainbow, Zama, and Shekilie basins.
- The medium-case undiscovered GIP for this play area is estimated to be $865 \times 10^6 \text{ m}^3$.

Play Area 5 – Winniepegosis

- Largest pool – Rich Winniepegosis A (GIP = $4 \times 10^6 \text{ m}^3$, area = 0.50 sections).
- Number of discovered pools – 1.

- The play area is defined by the presence of basinal and carbonate bank deposits, with occasional localized porosity development.
- The medium-case undiscovered GIP for this play area is estimated to be $5 \times 10^6 \text{ m}^3$.

Zama and Keg River Interval (10^6 m^3)

Play area	Booked GIP	Undiscovered GIP			Ultimate GIP		
		Low	Medium	High	Low	Medium	High
1 Keg River Sand - Utikuma Lake	3262	713	1350	2522	3975	4611	5784
2 Keg River Carbonate - Senex	2556	582	1164	2329	3138	3720	4885
3 Pinnacles - Rainbow, Shekilie, and Zama Basins	69867	4075	7950	15303	73942	77816	85169
4 Keg River - Bank	1350	448	865	1687	1798	2215	3037
5 Winnipegosis	4	0	5	32	4	9	36
Play area totals	77039	5818	11334	21873	82857	88371	98911