

NORTHWEST TERRITORIES

Hydrocarbon Potential and Exploration Play Trends

Focus on Oil & Gas

NORTHWEST TERRITORIES

Calgary, Alberta

June 7, 2004

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ACKNOWLEDGEMENT

This presentation is based in part on the following multi-client study by Sproule Associates Ltd.

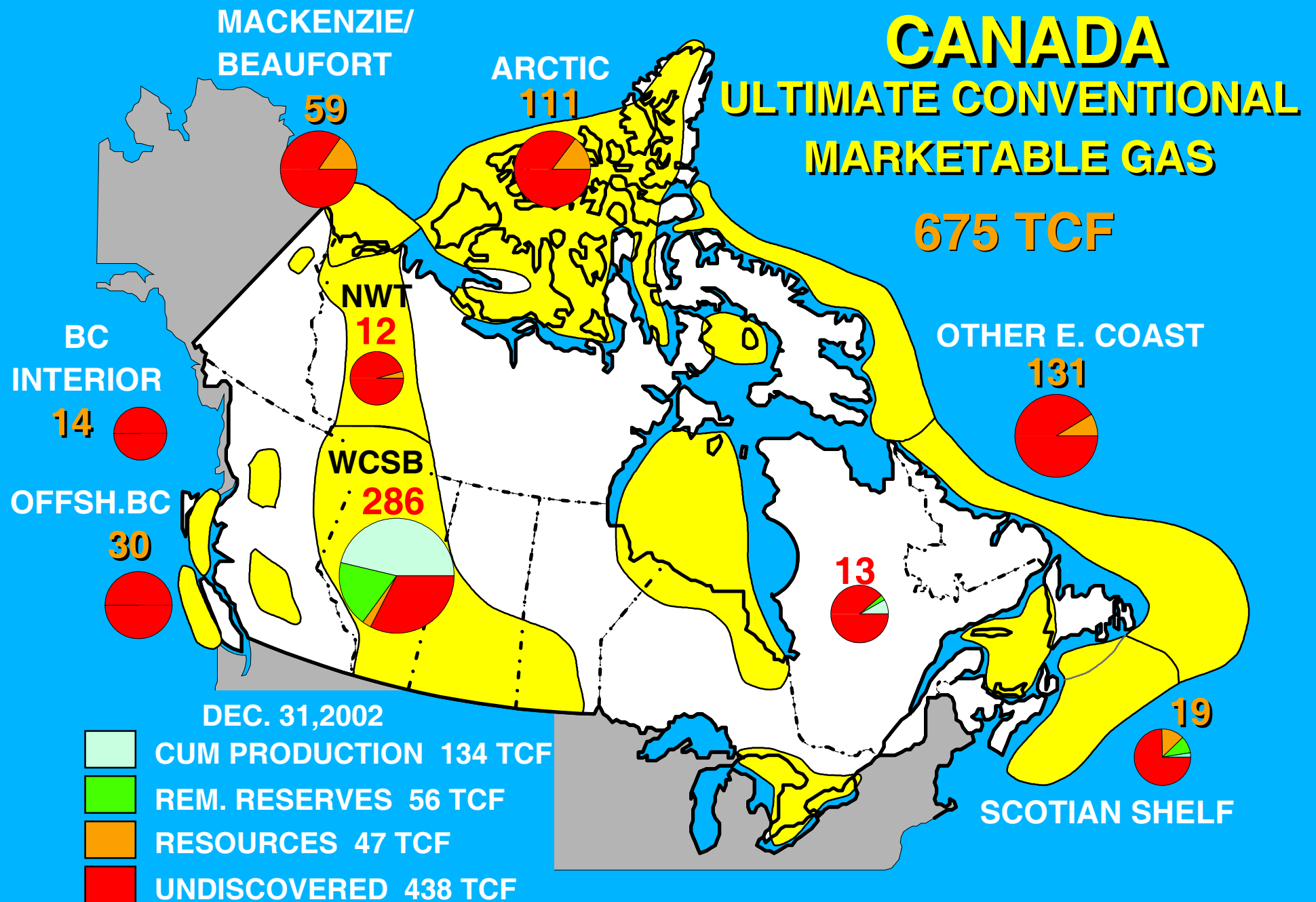
HYDROCARBON POTENTIAL AND
EXPLORATION PLAY TRENDS
NORTHWEST TERRITORIES AND YUKON
A Technical Inventory and Geological Review
July, 2000



The authors would like to acknowledge and thank Sproule Associates Limited for permission to present this paper.

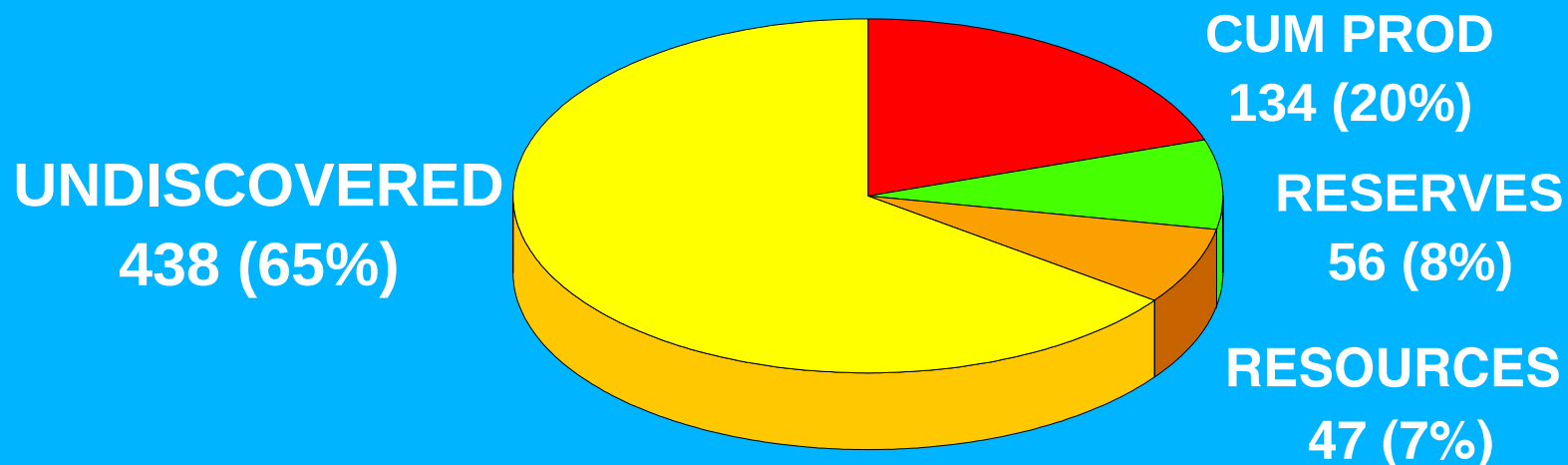
OBJECTIVES

- **TO COMPARE HYDROCARBON PROSPECTIVITY AND RESOURCE POTENTIAL OF THE DIFFERENT REGIONS**
- **TO HIGHLIGHT THOSE REGIONS THAT ALREADY CONTAIN SUBSTANTIAL DISCOVERED RESOURCES**
- **TO HIGHLIGHT THOSE REGIONS OR BASINS THOUGHT TO HAVE SIGNIFICANT UPSIDE RESOURCE POTENTIAL - NOT YET DISCOVERED**



Adapted from Drummond, 1998

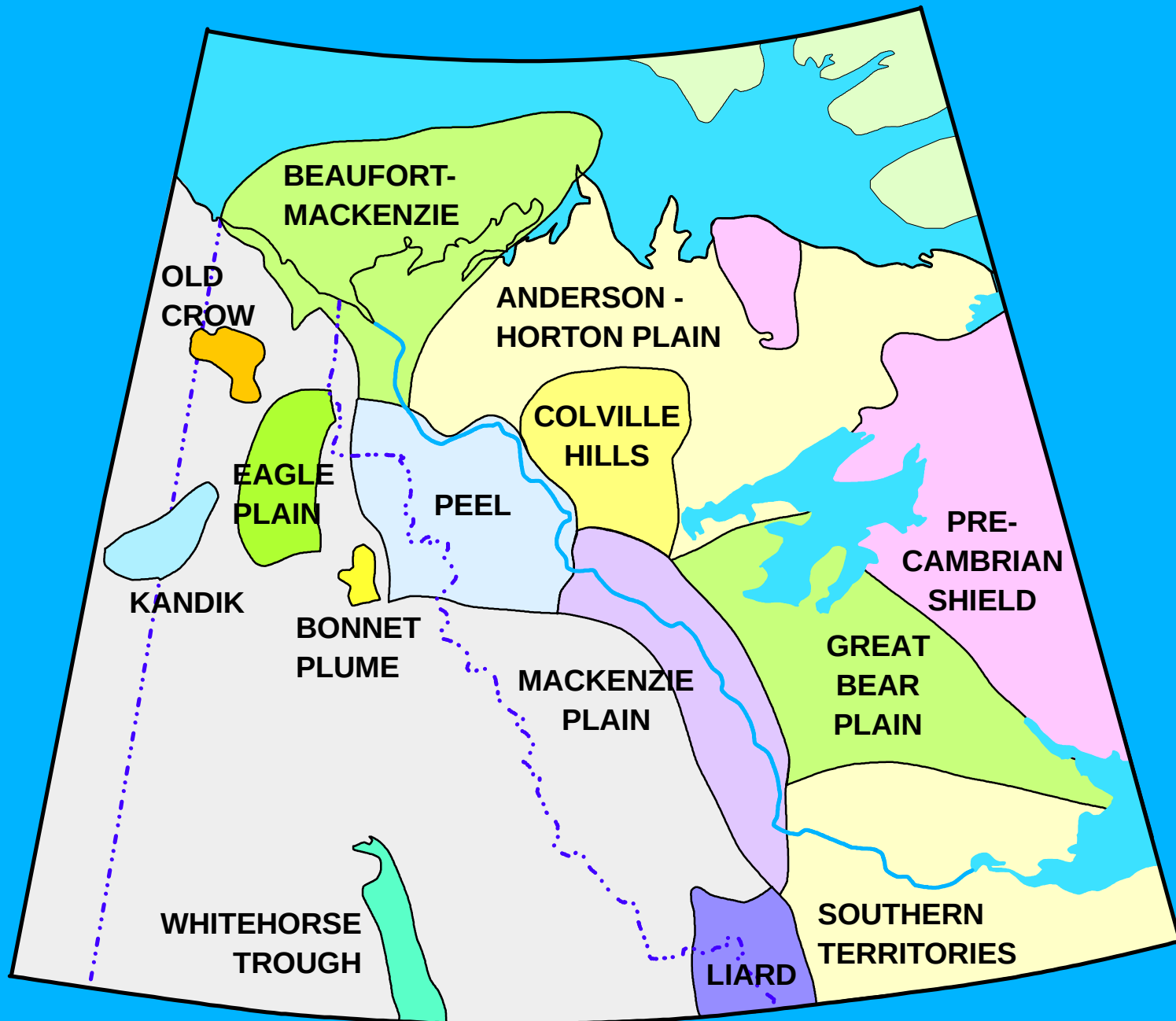
CONVENTIONAL MARKETABLE GAS CANADA (DECEMBER 31, 2002)



ULTIMATE RESOURCE (675 TCF)

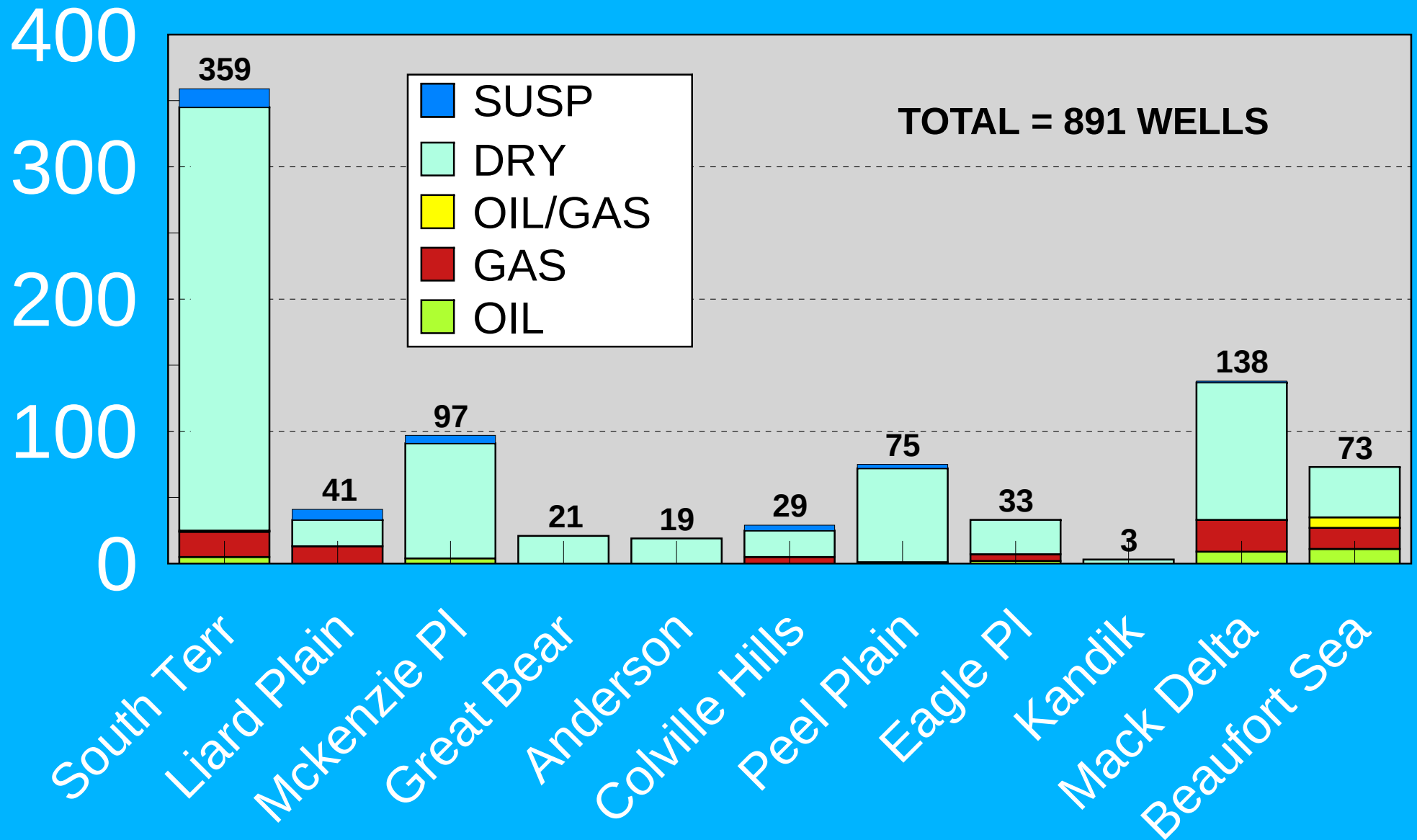
• WCSB	286	(43%)
• ARCTIC	111	(16%)
• OTHER EAST COAST	131	(19%)
• MACKENZIE-BEAUFORT	59	(9%)
• OFFSHORE BC	30	(4%)
• SCOTIAN SHELF	19	(3%)
• OTHER	27	(4%)
• MAINLAND NWT	12	(2%)

SEDIMENTARY BASINS OF THE YUKON - NORTHWEST TERRITORIES



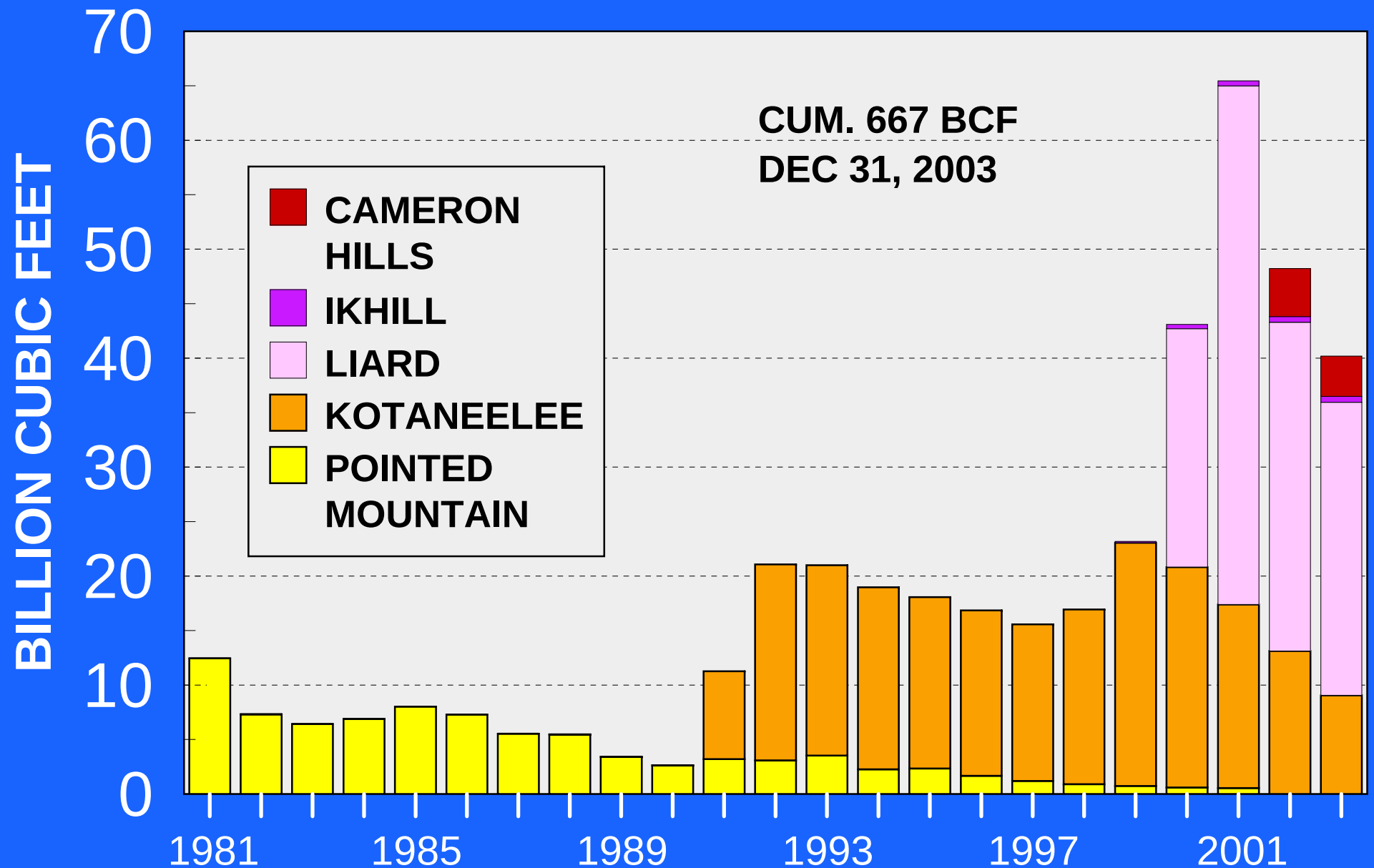
YUKON AND NORTHWEST TERRITORIES

NUMBER EXPLORATION WELLS BY AREA



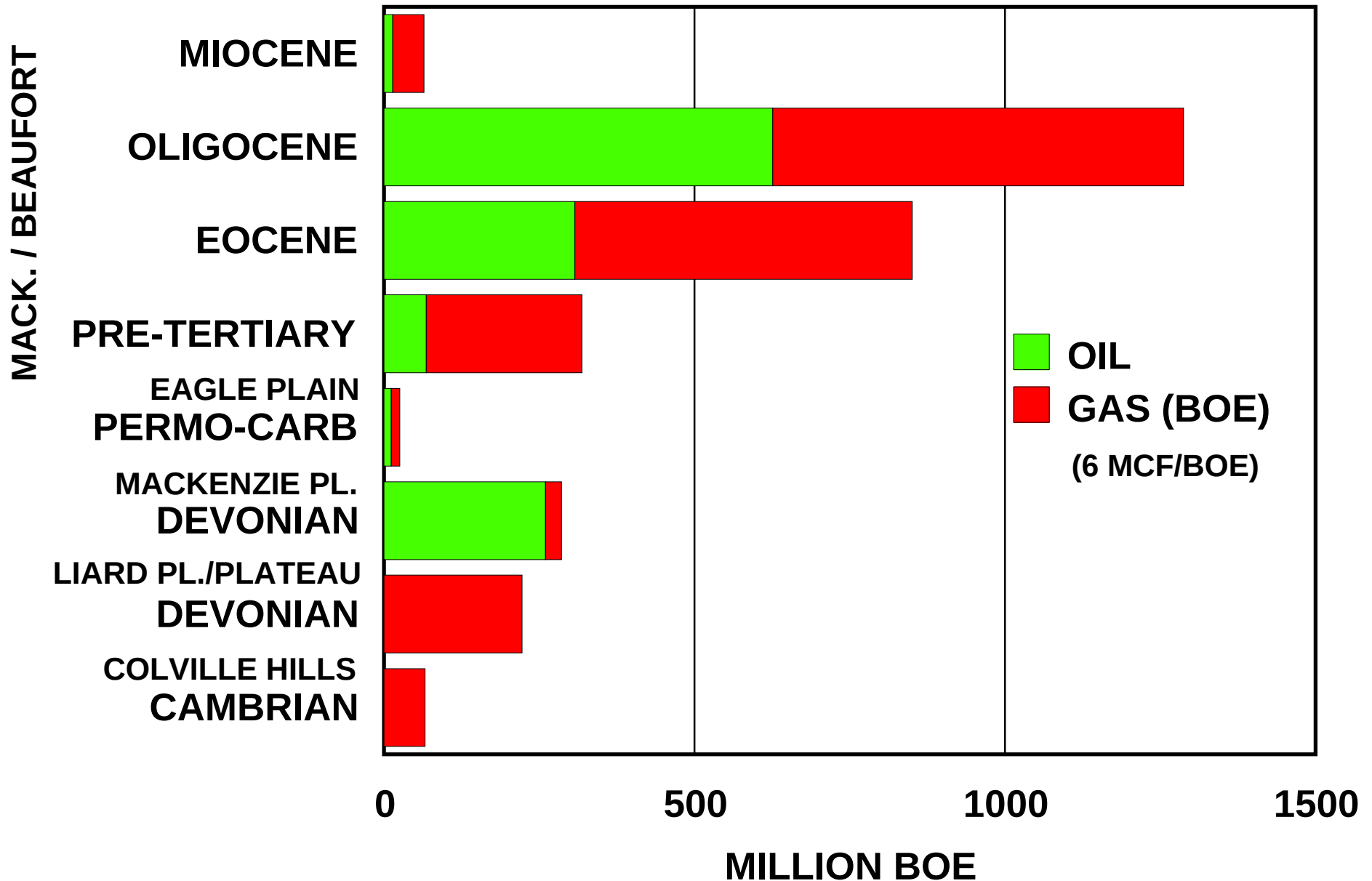
YUKON/ NORTHWEST TERRITORIES

ANNUAL GAS PRODUCTION



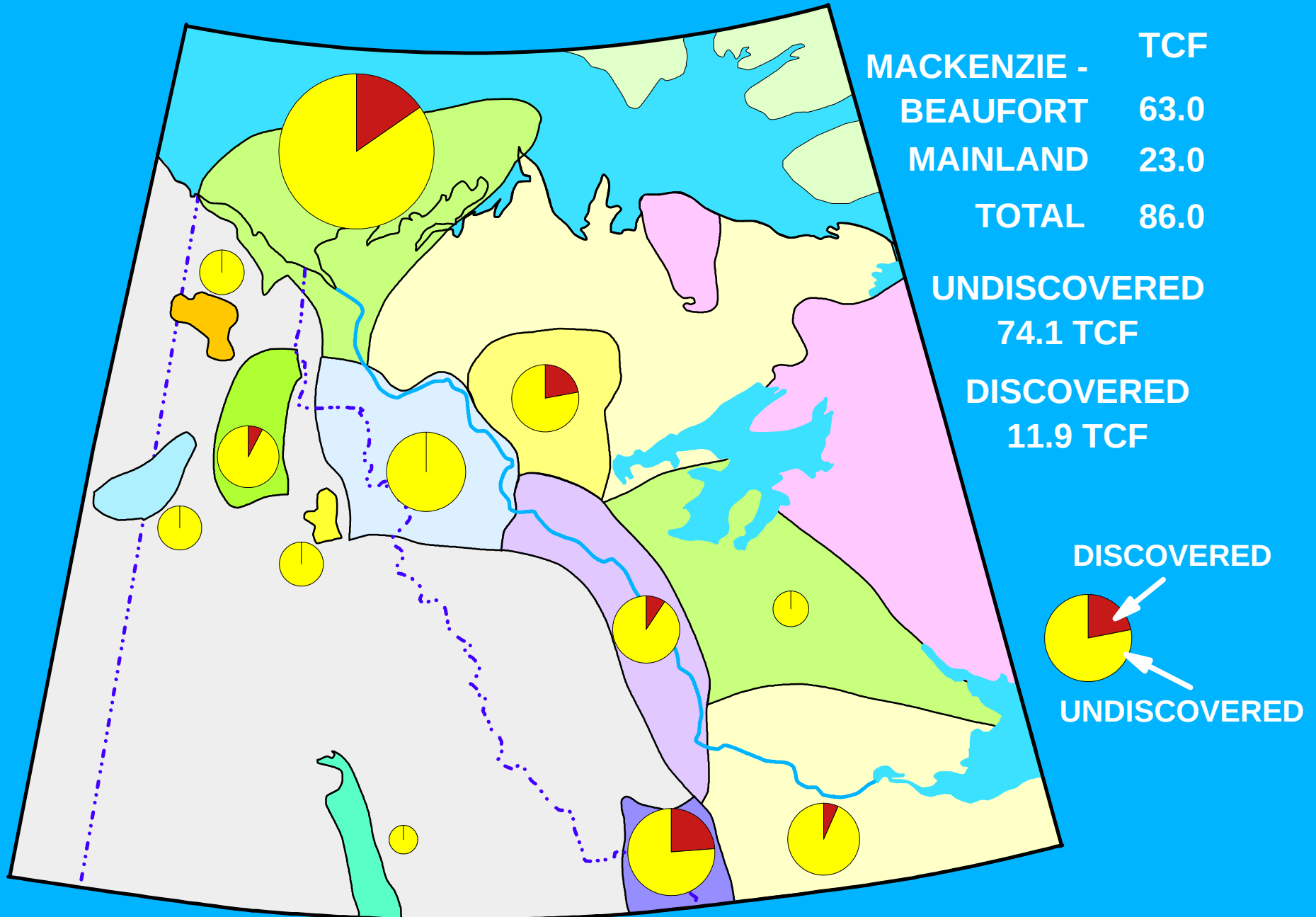
YUKON / NORTHWEST TERRITORIES

DISCOVERED RESOURCES BY STRATIGRAPHIC SYSTEM



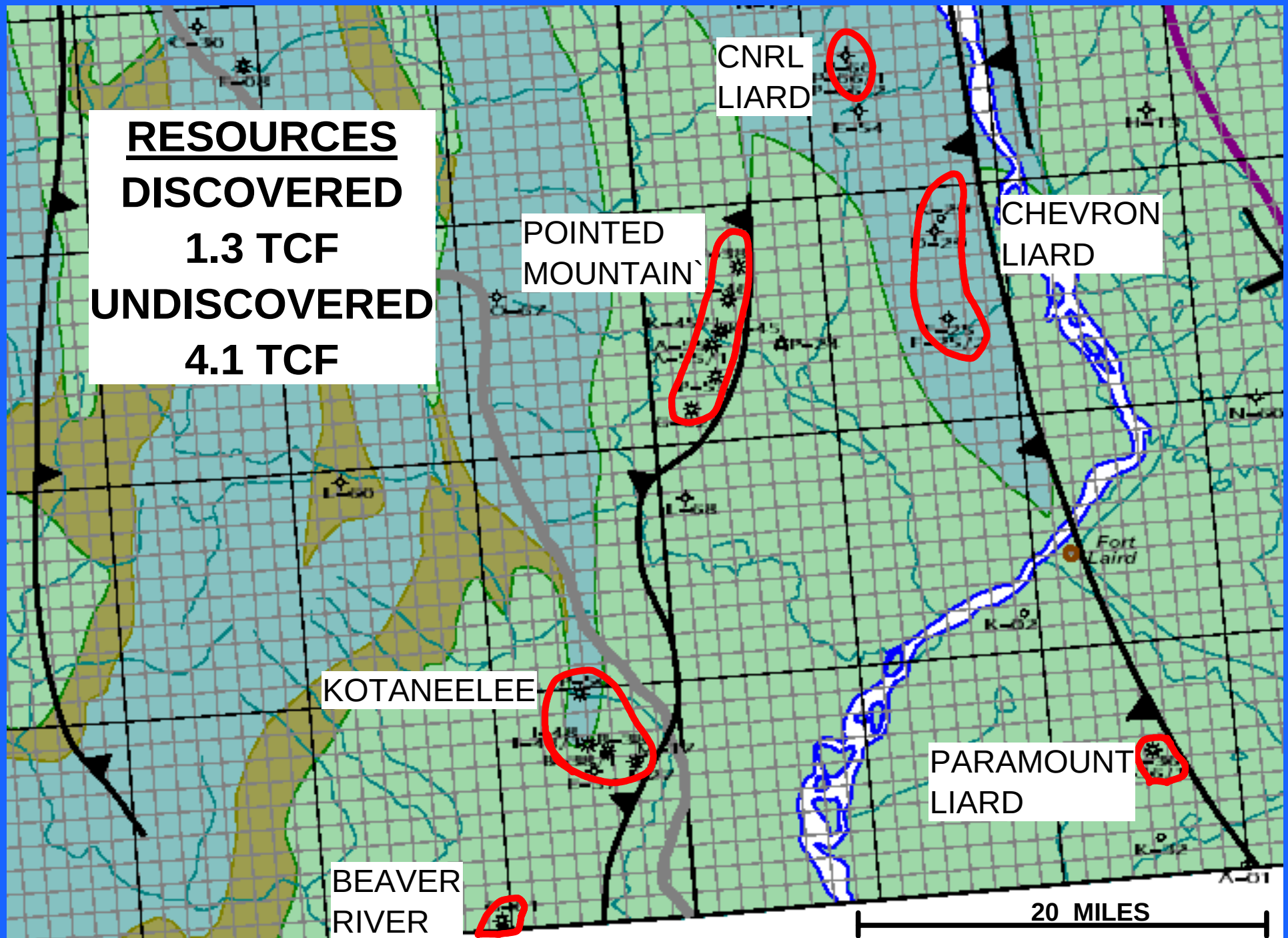
YUKON - NORTHWEST TERRITORIES

ULTIMATE RECOVERABLE GAS RESOURCES

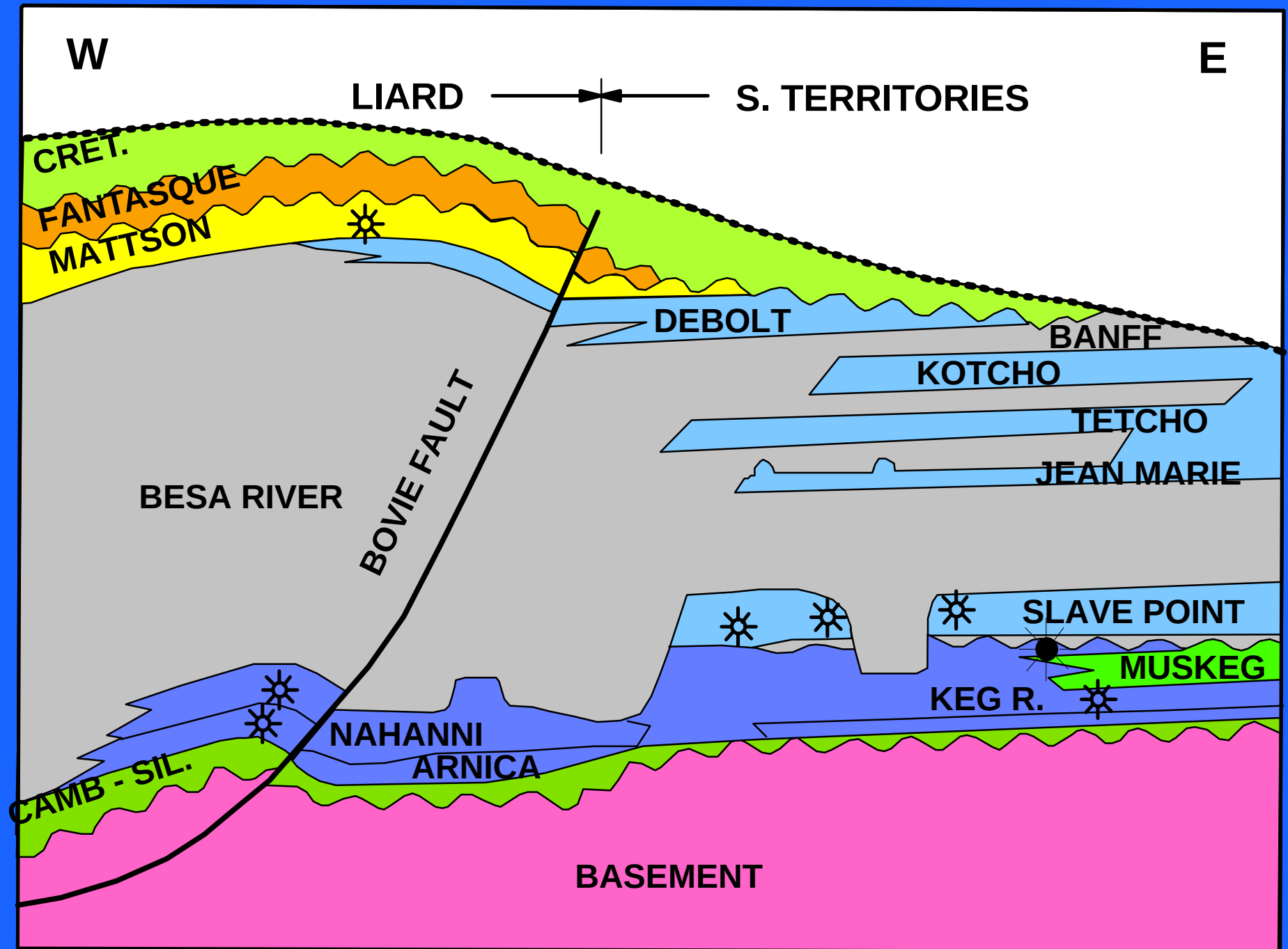


GAS FIELDS OF THE LIARD AREA

RESOURCES
DISCOVERED
1.3 TCF
UNDISCOVERED
4.1 TCF



LIARD - S. TERRITORIES SCHEMATIC SECTION



Modified from NOGD, 1995

Fort Liard, NWT

Production to Apr. 30, 2004

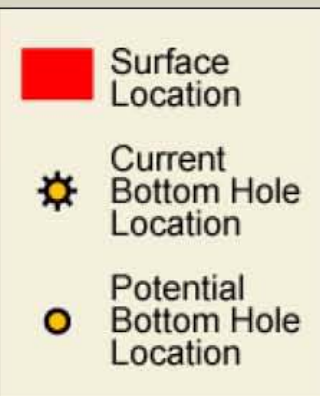
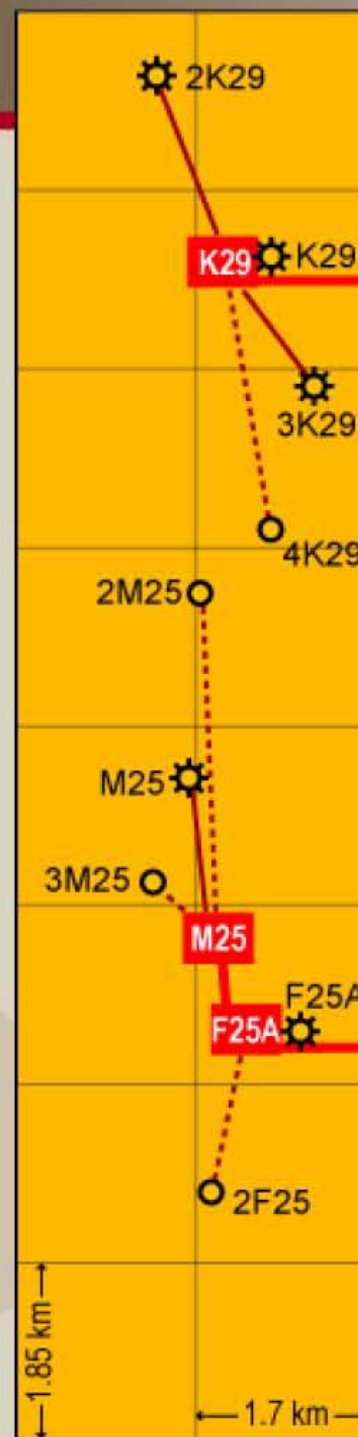
K-29	43.8 bcf	
M-25	29.1 bcf	
F-25A	5.2 bcf	
2K-29	5.9 bcf	
Total:	84.0 bcf	(sales)

Gross raw gas to date: 120.0 bcf

PEL current production: ~12 mmcf/d (sales)

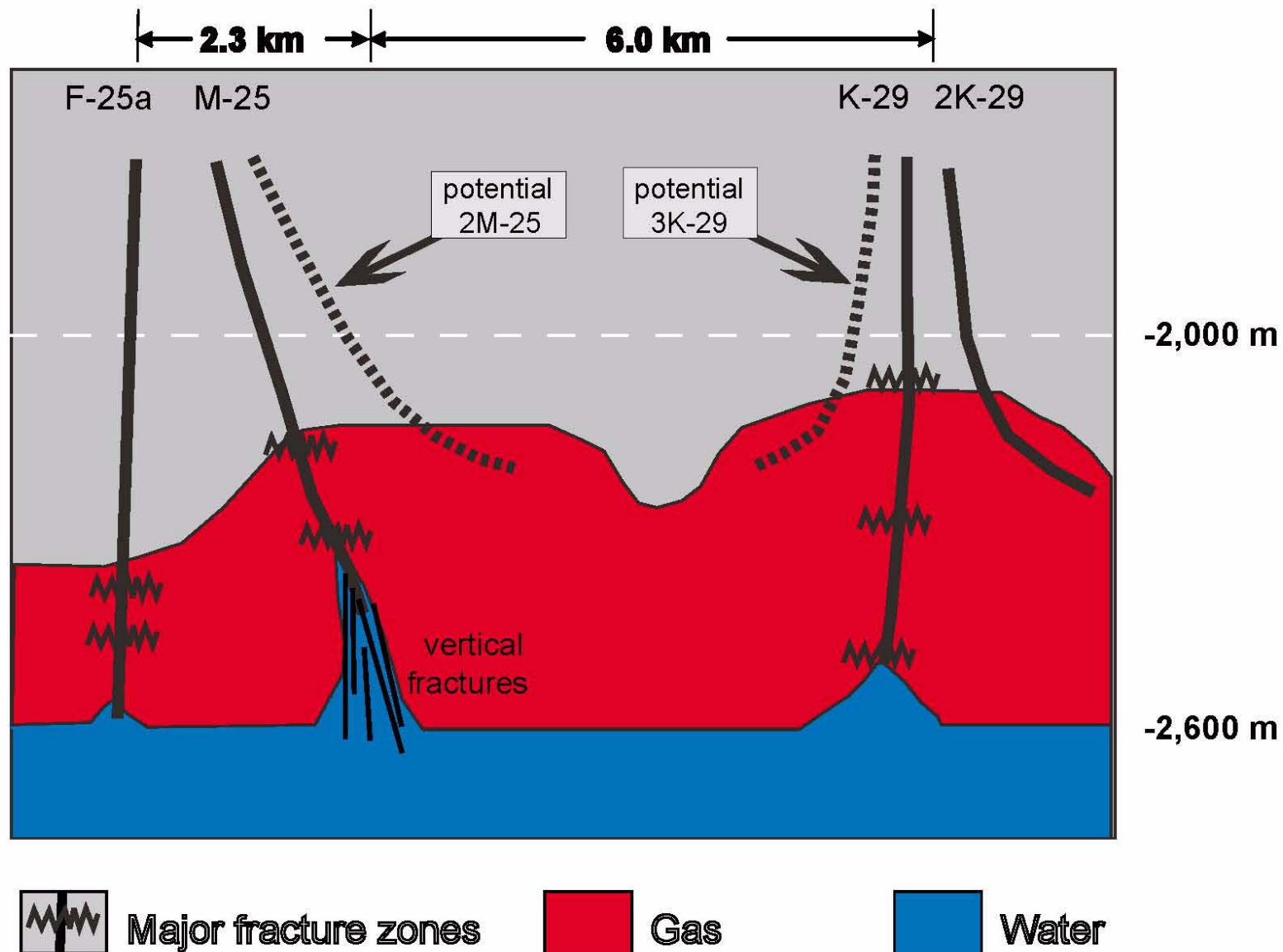
M-25 presently shut in pending tubing change and repairs to gas/water line

3K-29 to be side-tracked summer, 2004



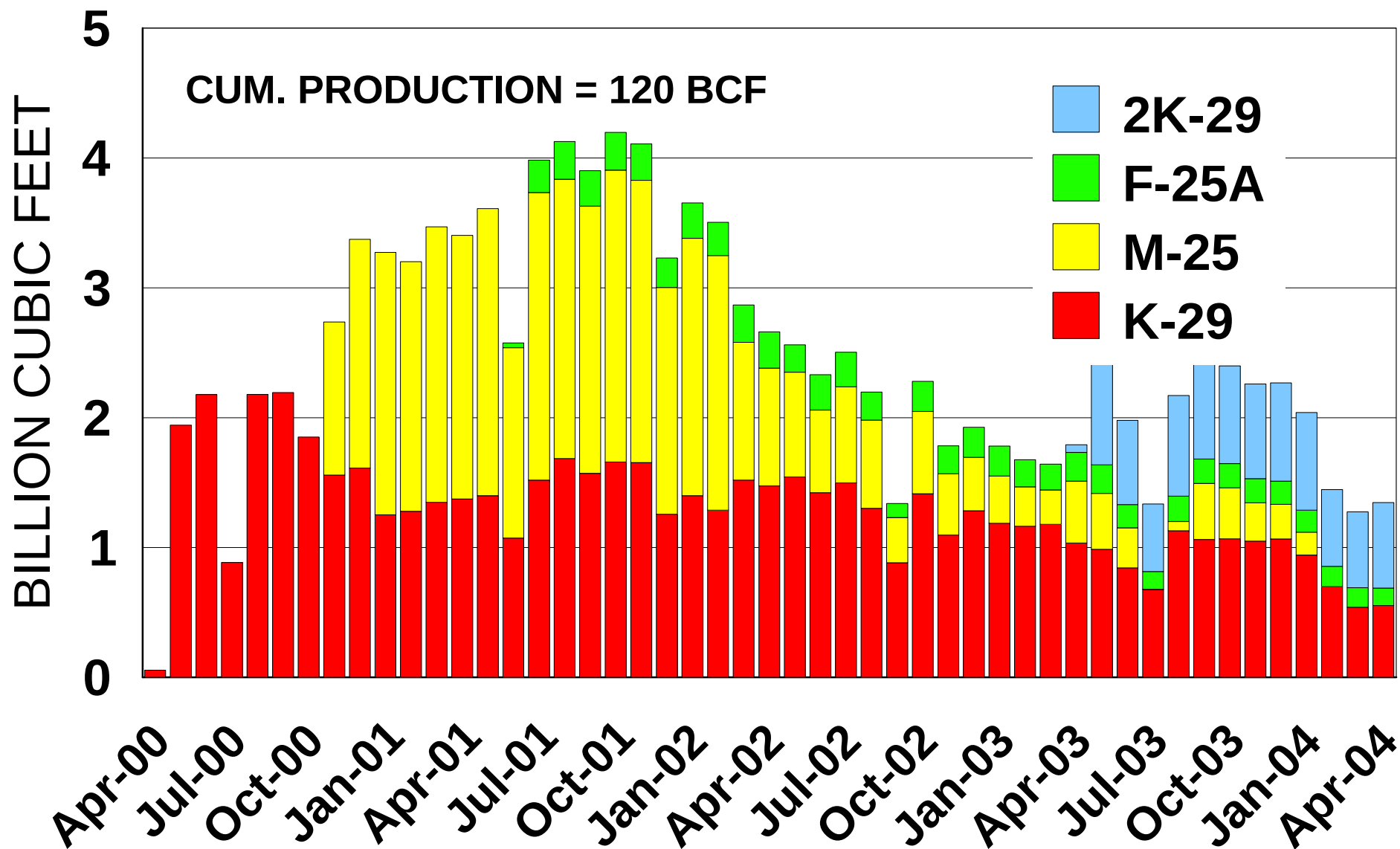
FORT LIARD CROSS SECTION

- Water traveling vertically up M-25 fractures and entering well bore
- M-25 successful recompletion in August 2003 increased rate to over 15 mmcf/d raw gas
- M-25 has sidetrack potential
- 3K-29 & 2M-25 to be drilled during 2004

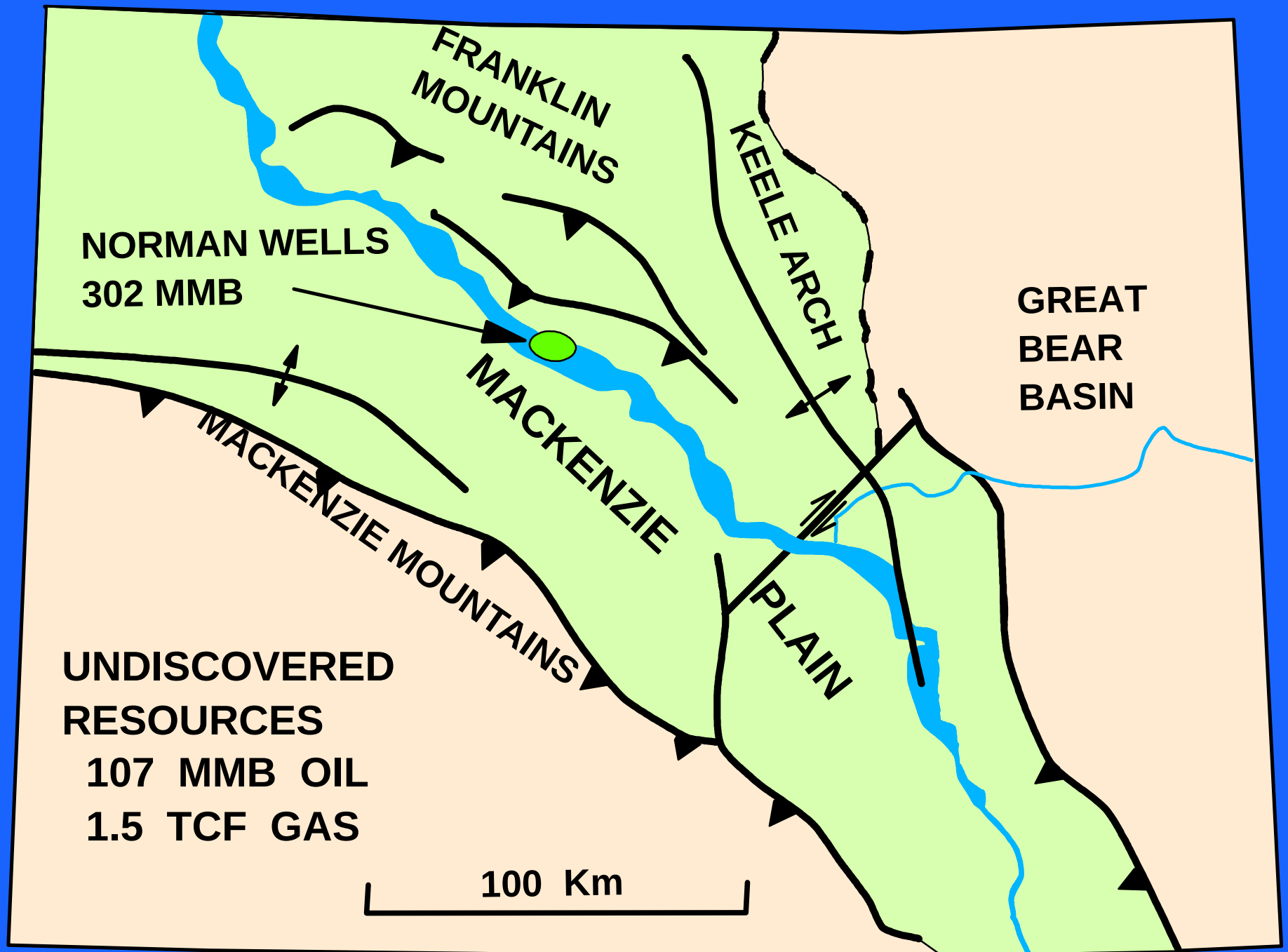


From: Purcellenergy.com

CHEVRON FORT LIARD GAS FIELD PRODUCTION

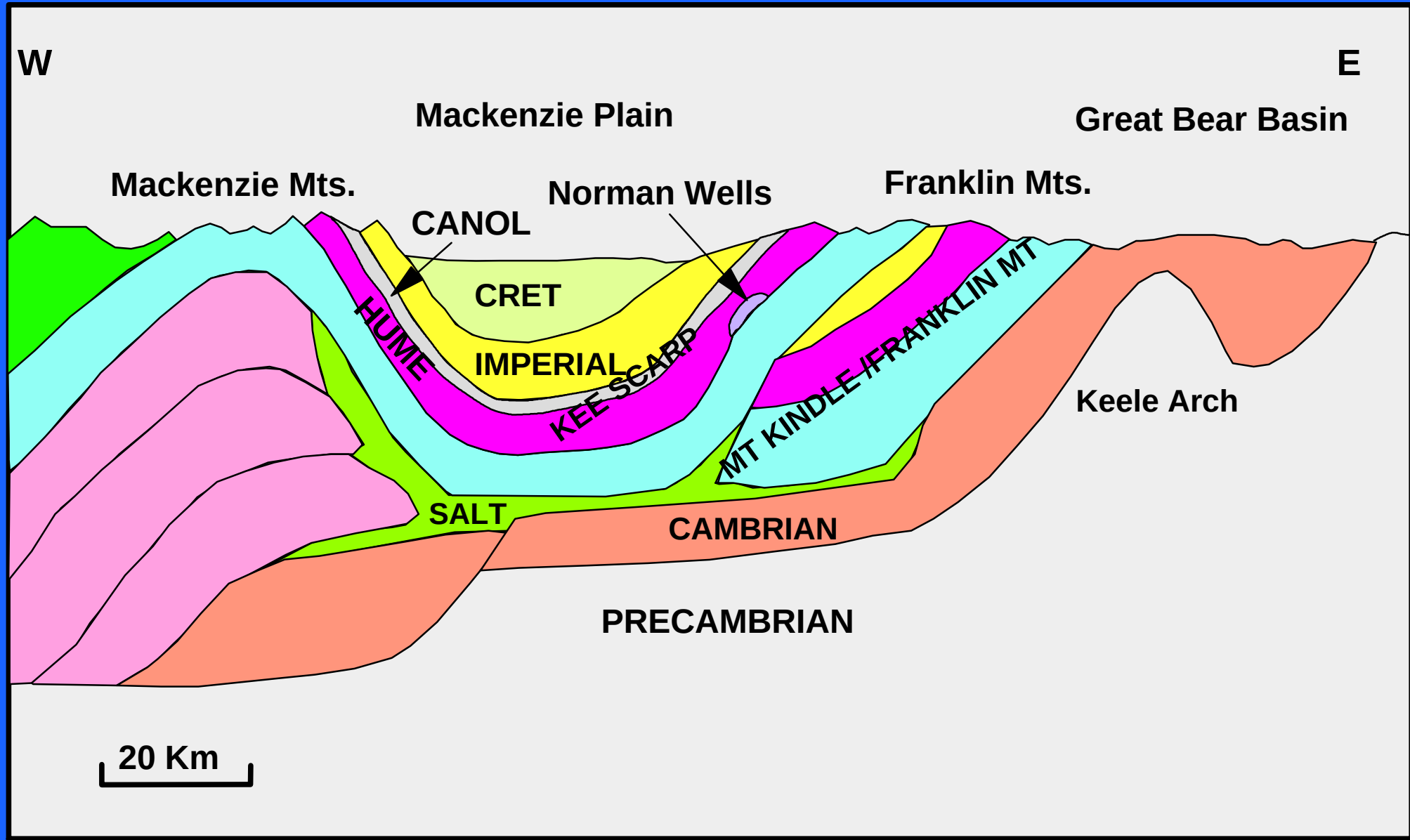


MACKENZIE PLAIN BASIN



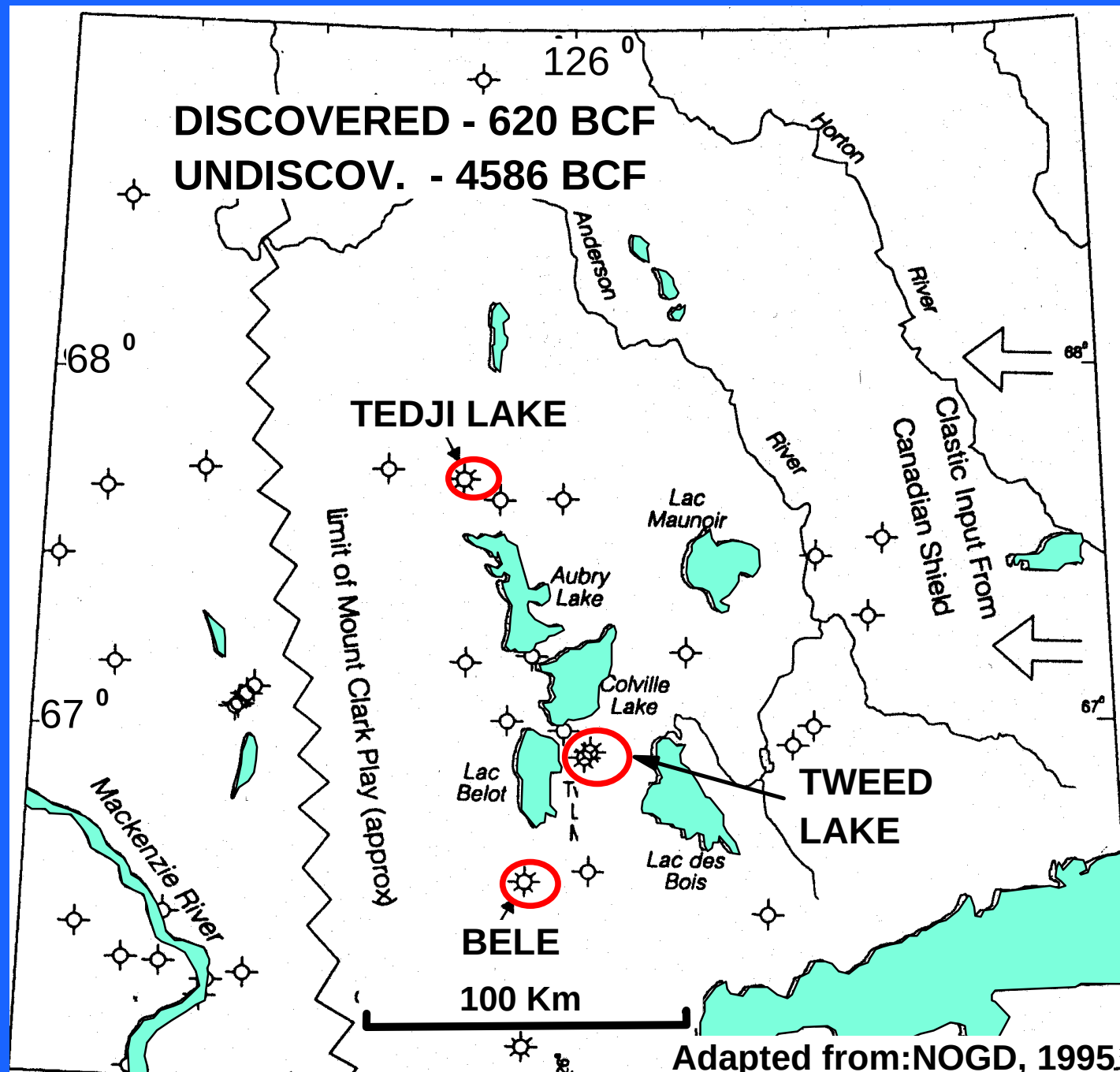
Modified from NOGD, 1995

MACKENZIE PLAIN - SCHEMATIC SECTION

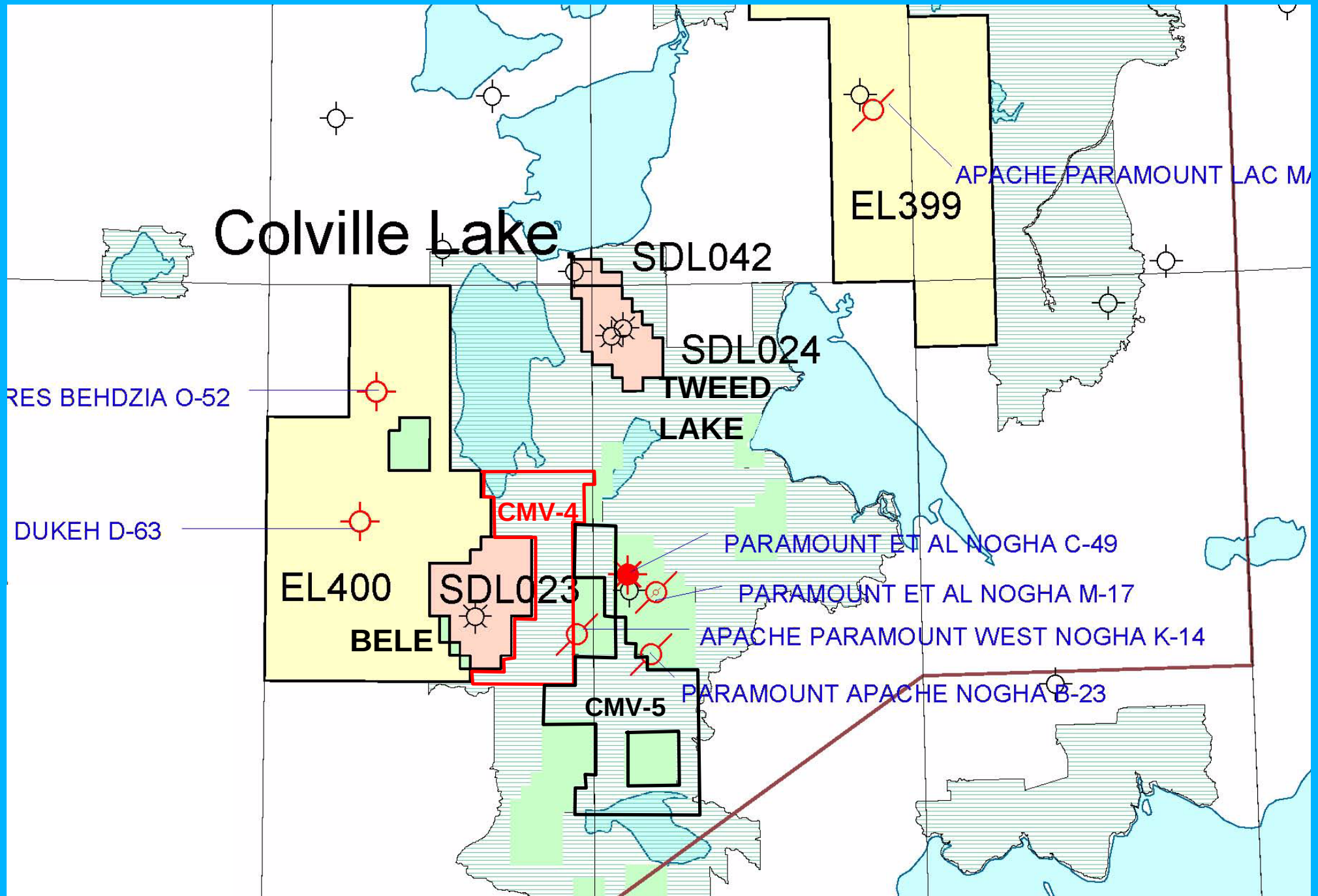


Modified from NOGD, 1995

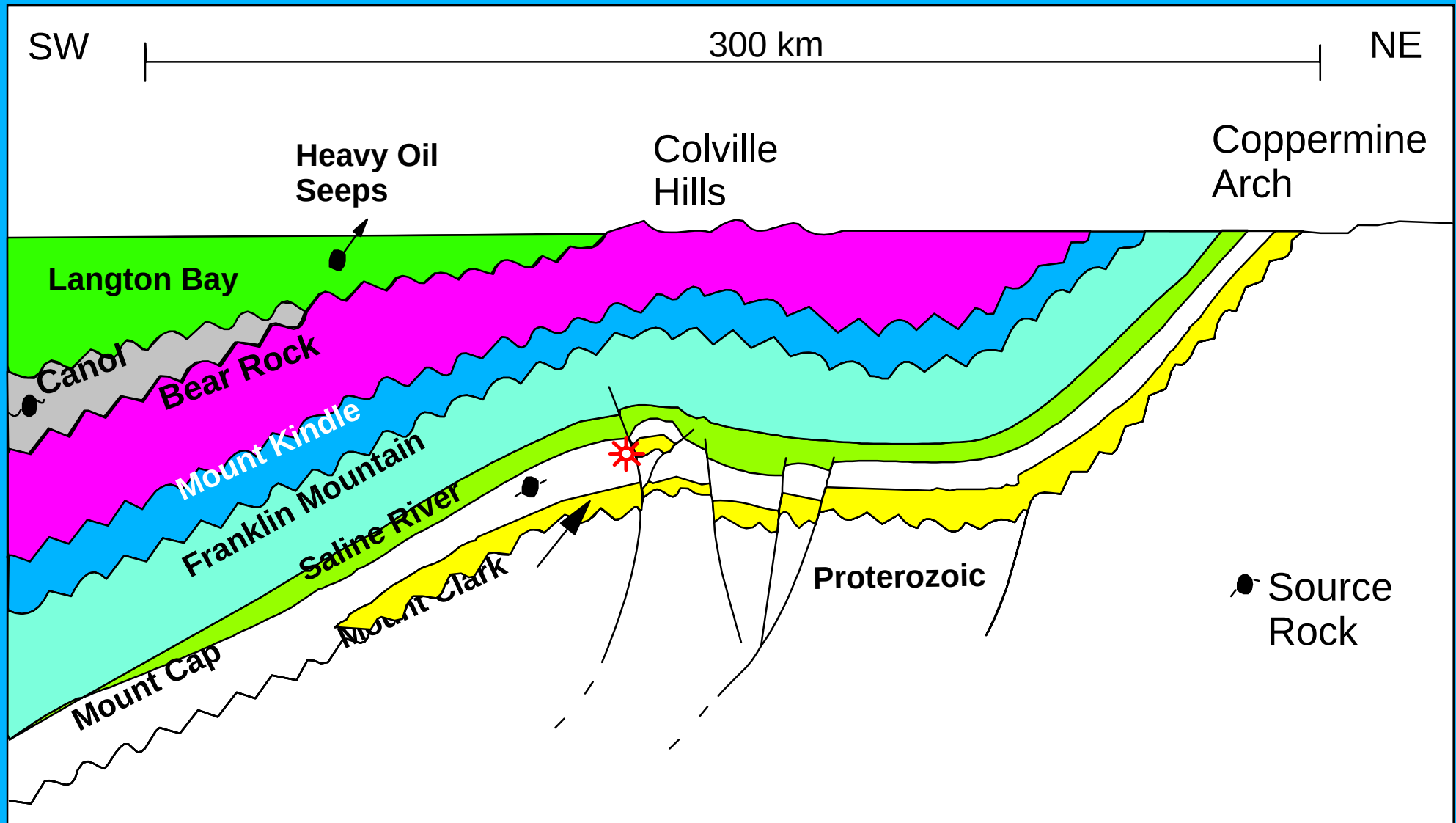
COLVILLE HILLS, NWT SHOWING LOCATION OF CAMBRIAN SANDSTONE GAS DISCOVERIES



COLVILLE HILLS - DRILLING 2003/2004



SCHEMATIC SECTION, COLVILLE HILLS AREA



Modified from NOGD, 1995

Colville Lake, NWT

TEDJI LK. K - 24

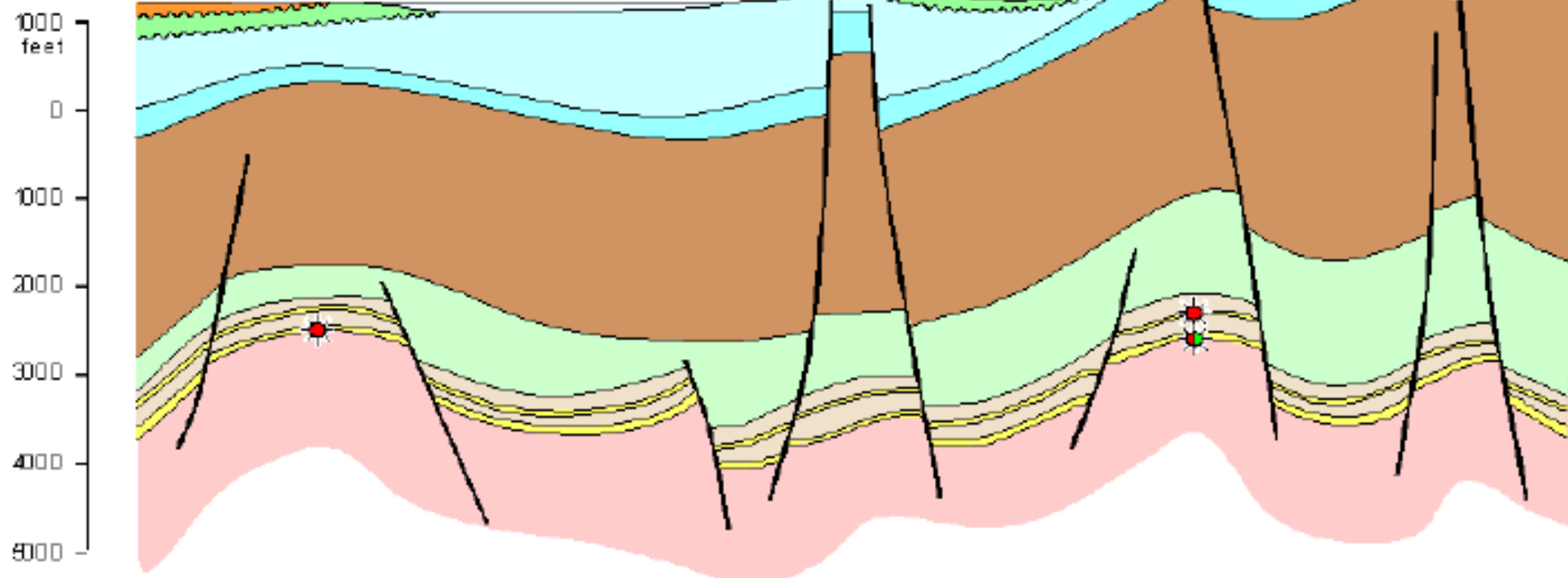
COLVILLE E - 15

TWEED LAKE M - 47

AUBREY LAKE

COLVILLE LAKE

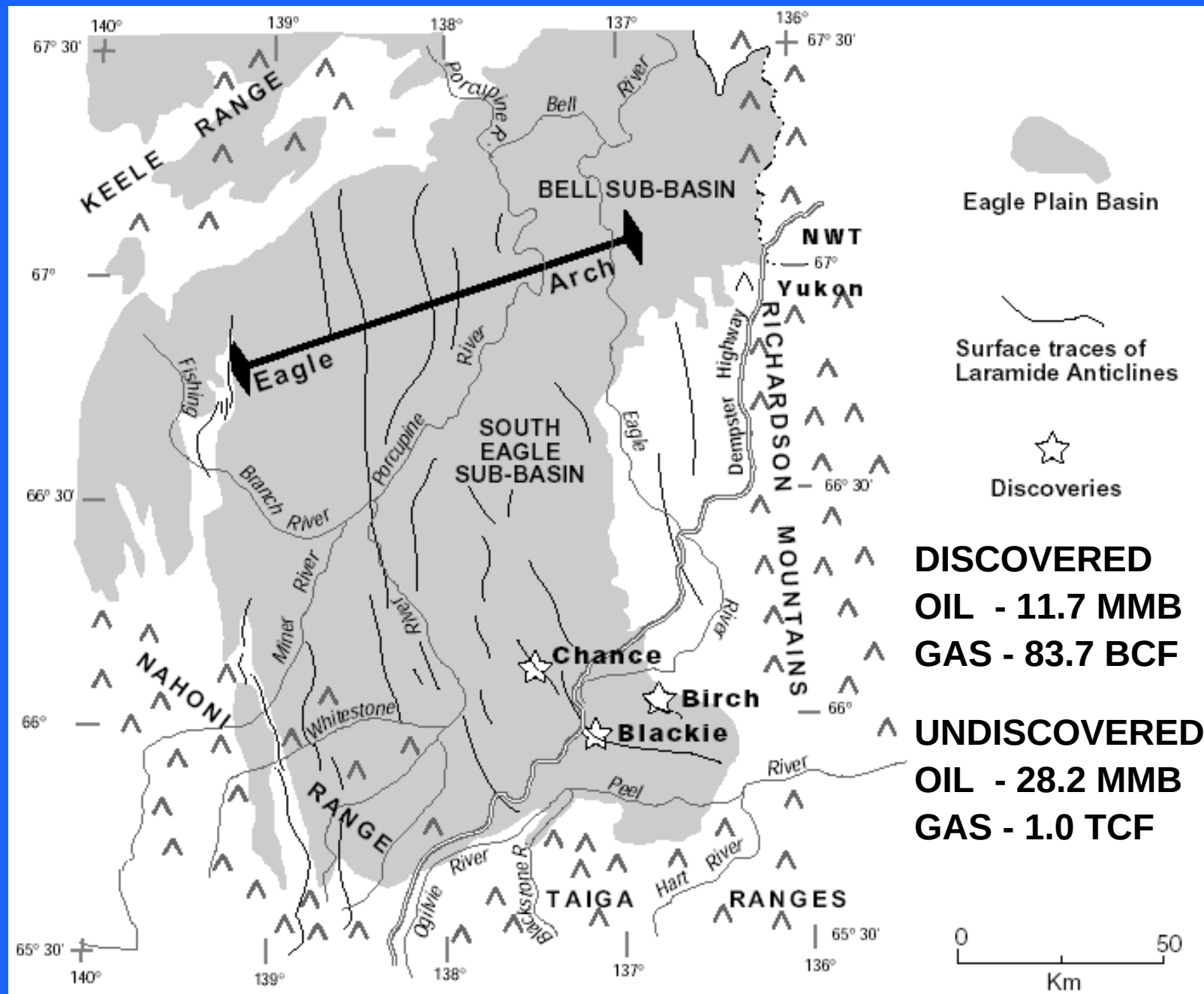
LAC DES BOIS



**NNW - SSE CROSS SECTION
TEDJI LAKE - LAC DES BOIS**

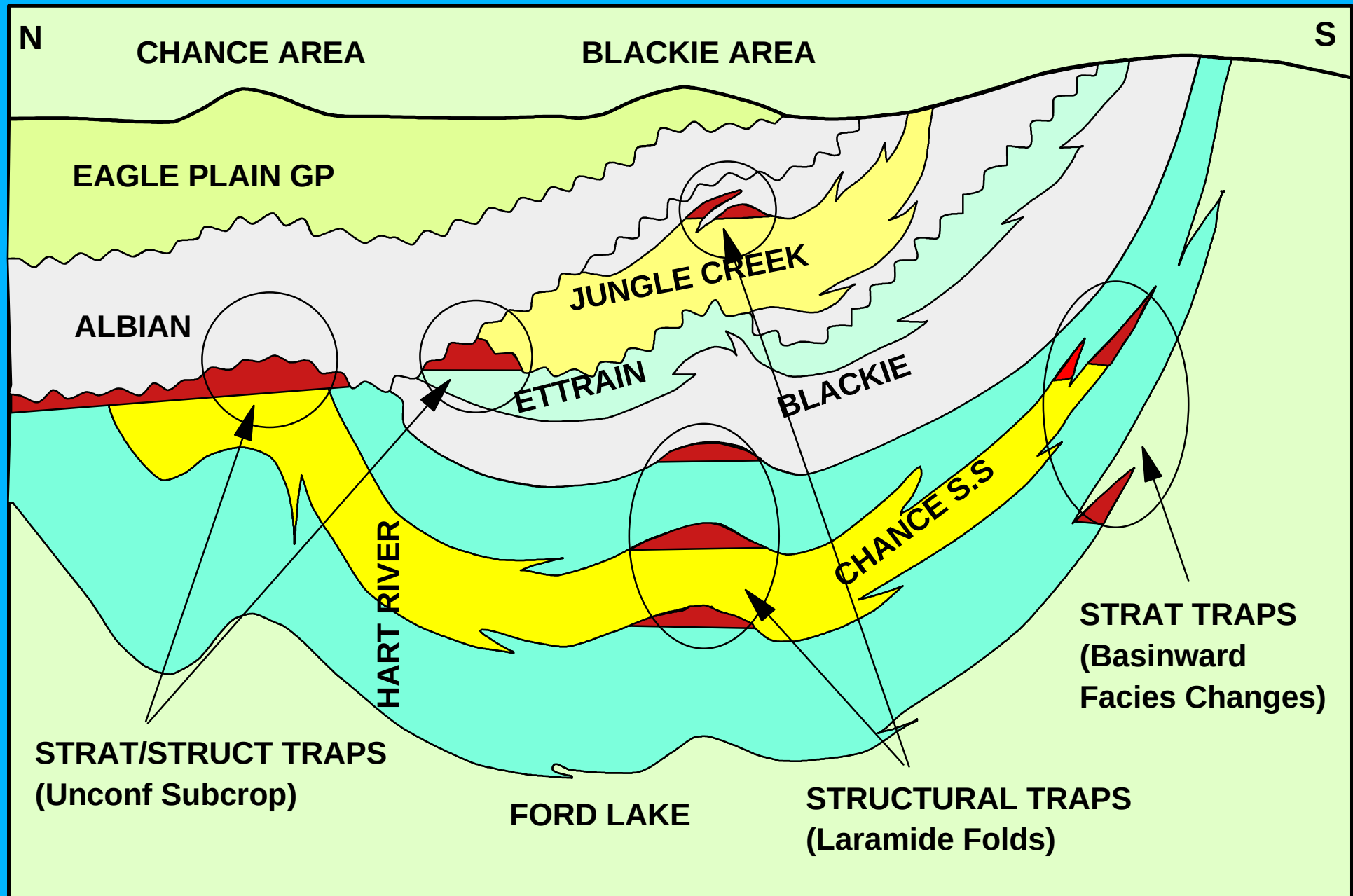
From: www.paramountres.com

EAGLE PLAIN BASIN



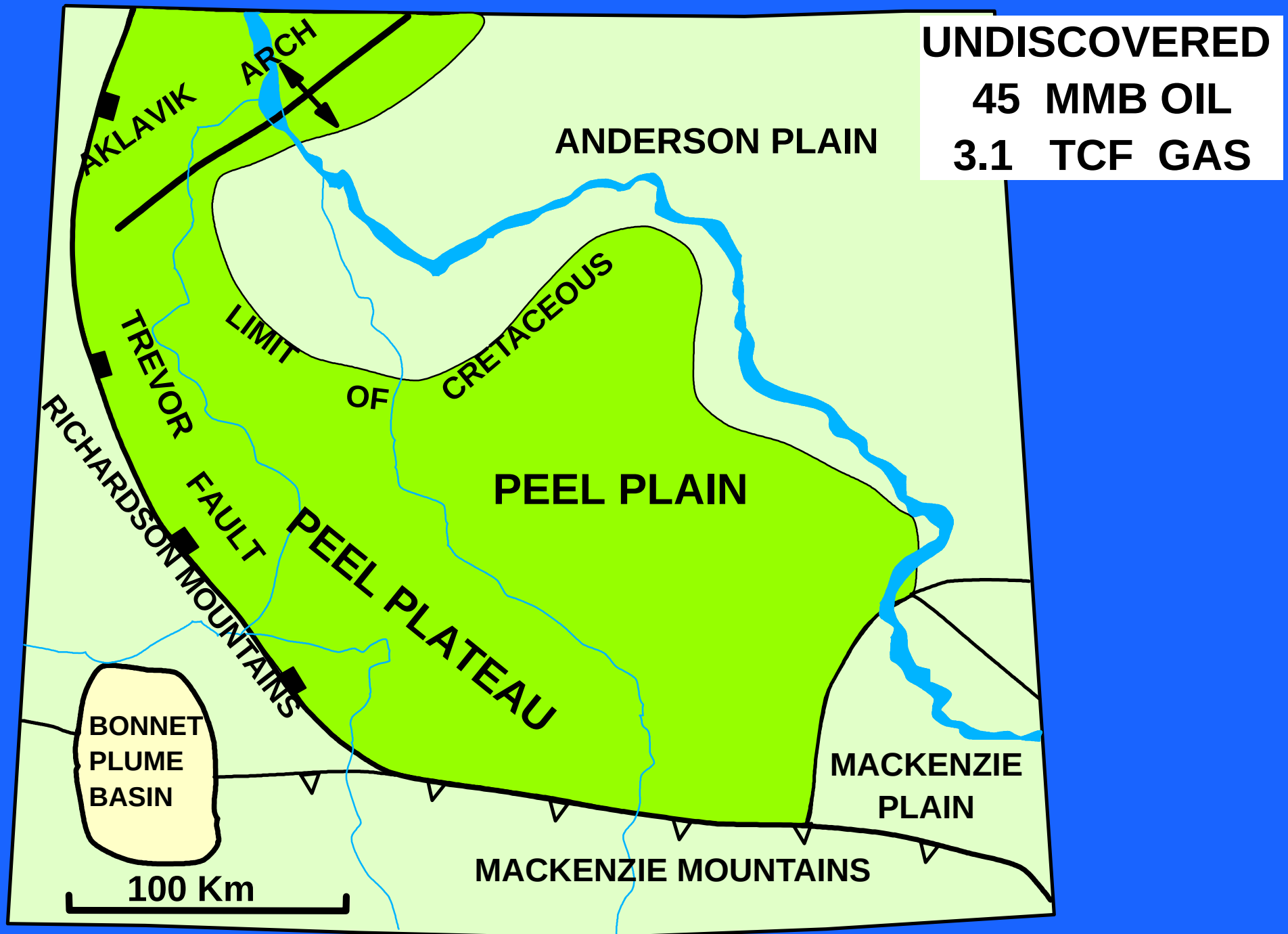
Modified from Yukon Ec. Dev., NEB, 1994

EAGLE PLAIN BASIN - POTENTIAL RESERVOIRS AND TRAPS



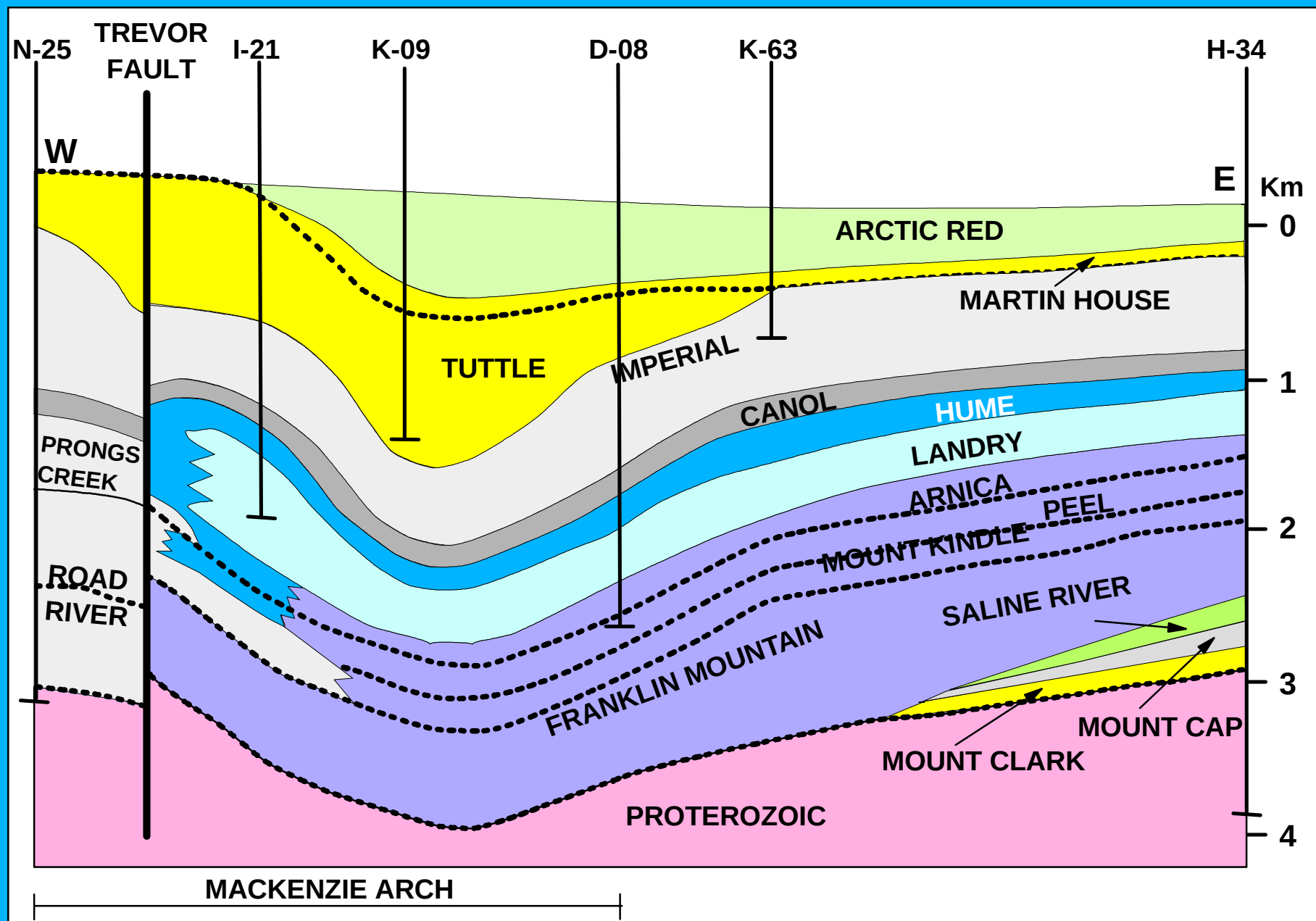
Modified From: Hambelin, 1990

PEEL BASIN AND PLATEAU



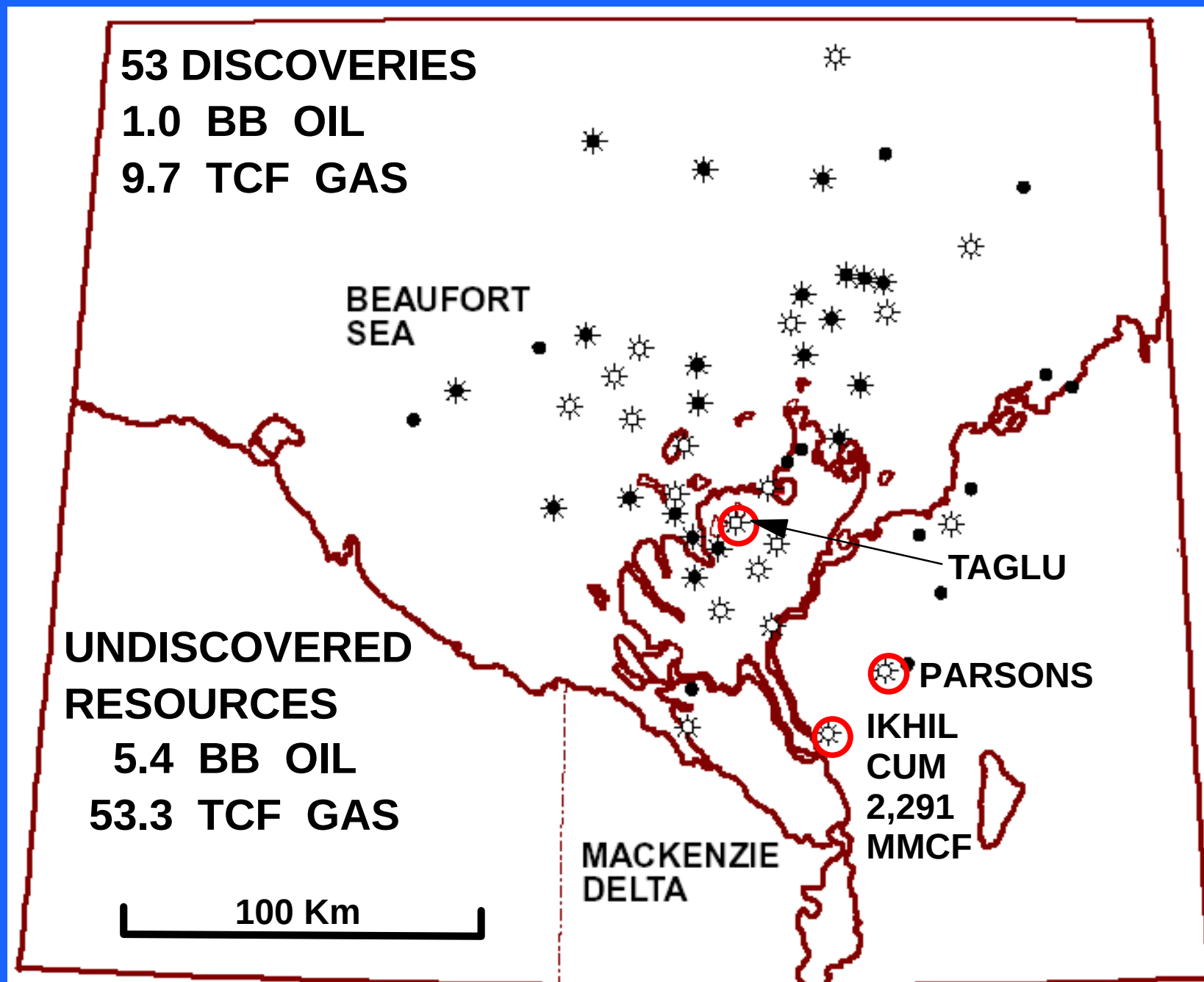
Modified from NOGD, 1995

CENTRAL PEEL PLAIN

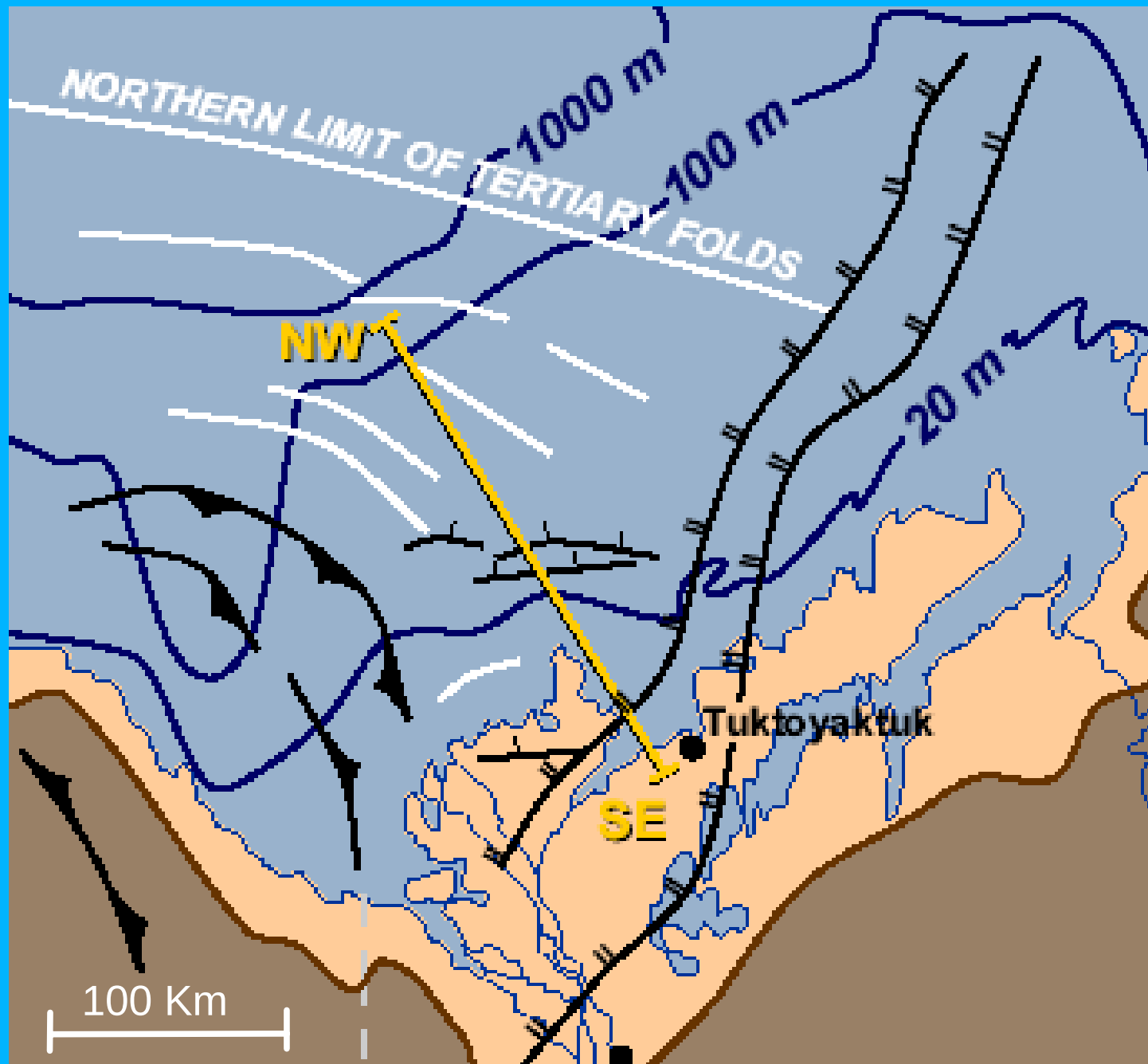


Modified from Yukon Ec. Dev., NEB, 1999

BEAUFORT - MACKENZIE BASIN DISCOVERED OIL AND GAS FIELDS

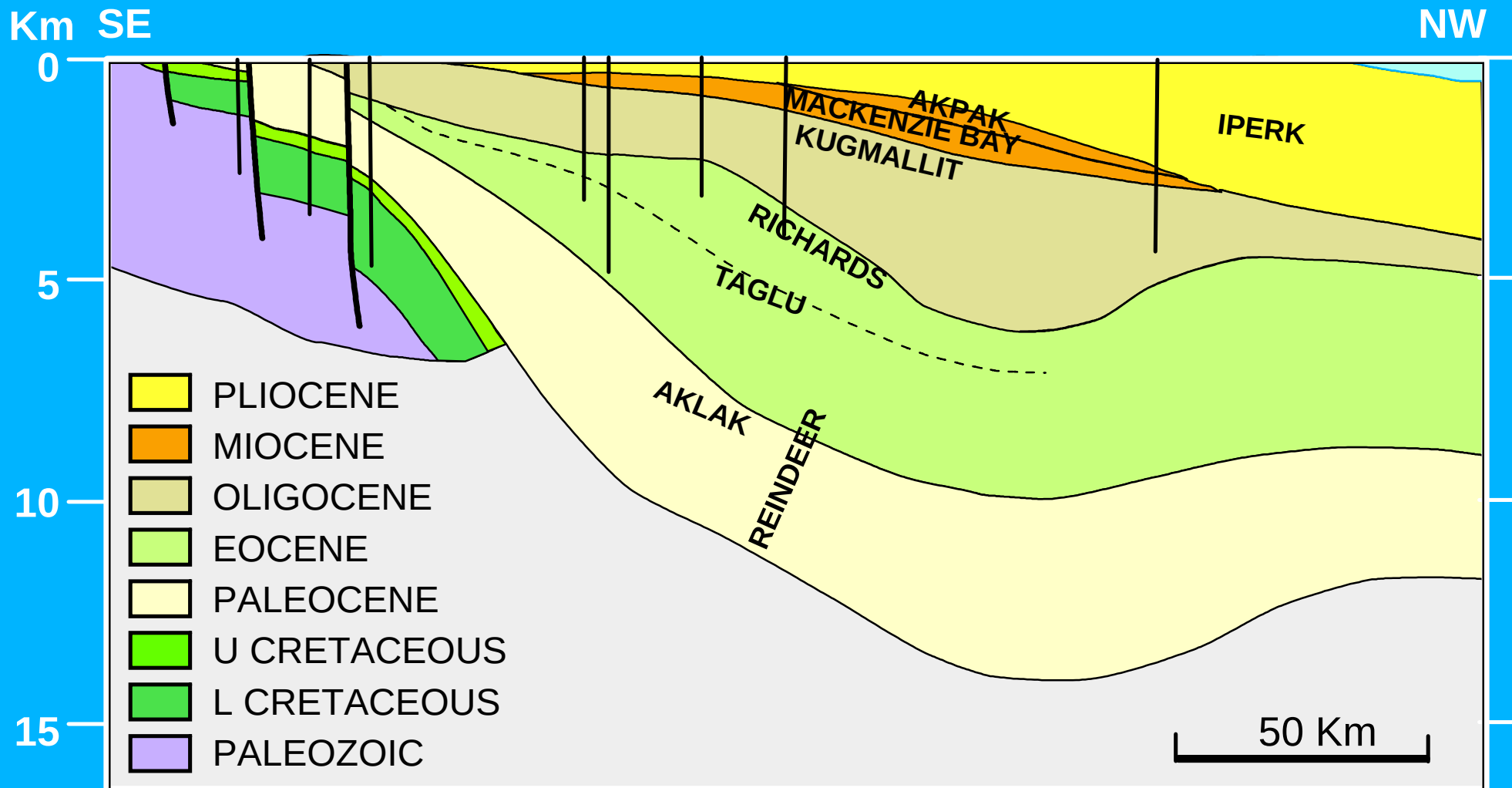


BEAUFORT MACKENZIE - STRUCTURAL SETTING



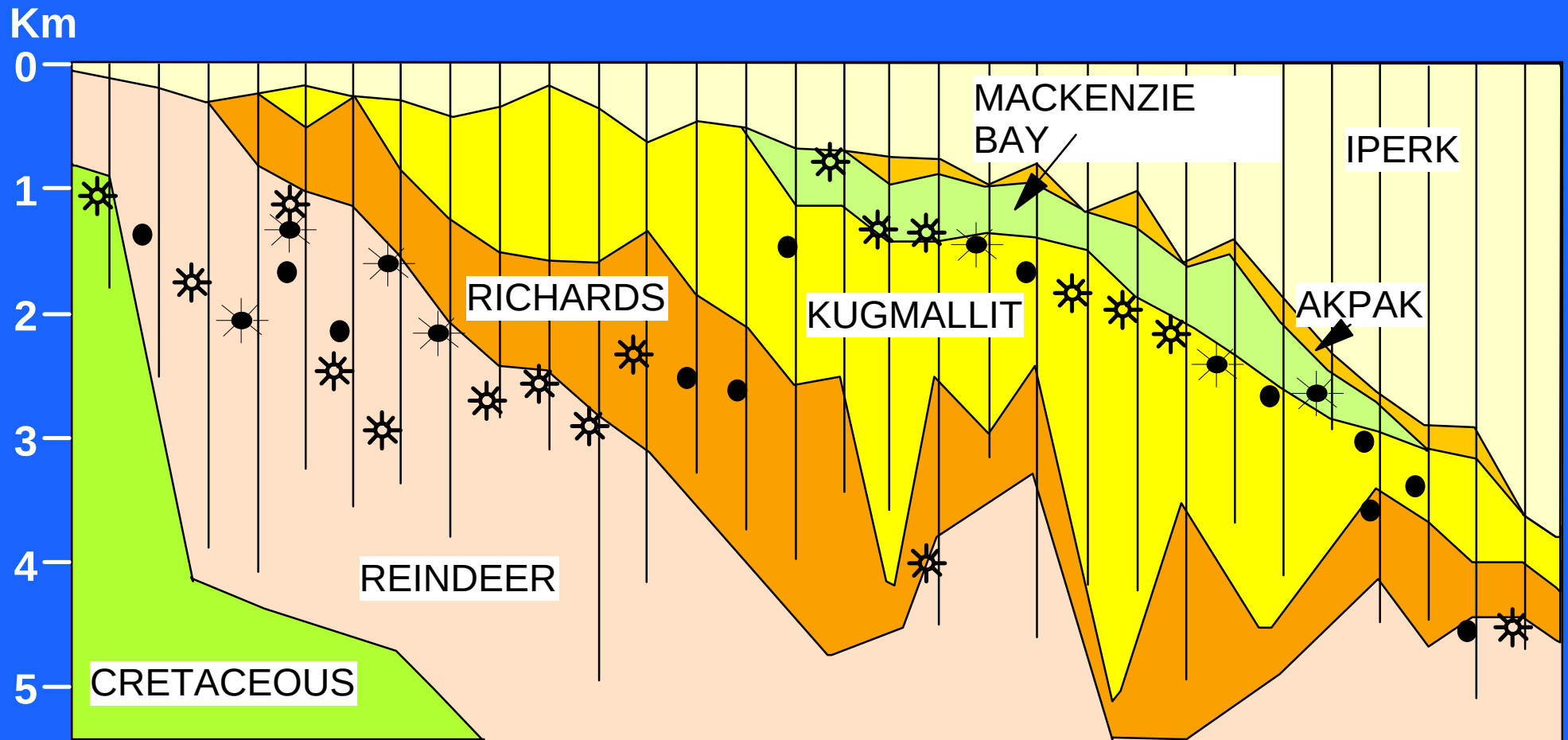
Modified from Dixon, et al, 1992

BEAUFORT MACKENZIE BASIN



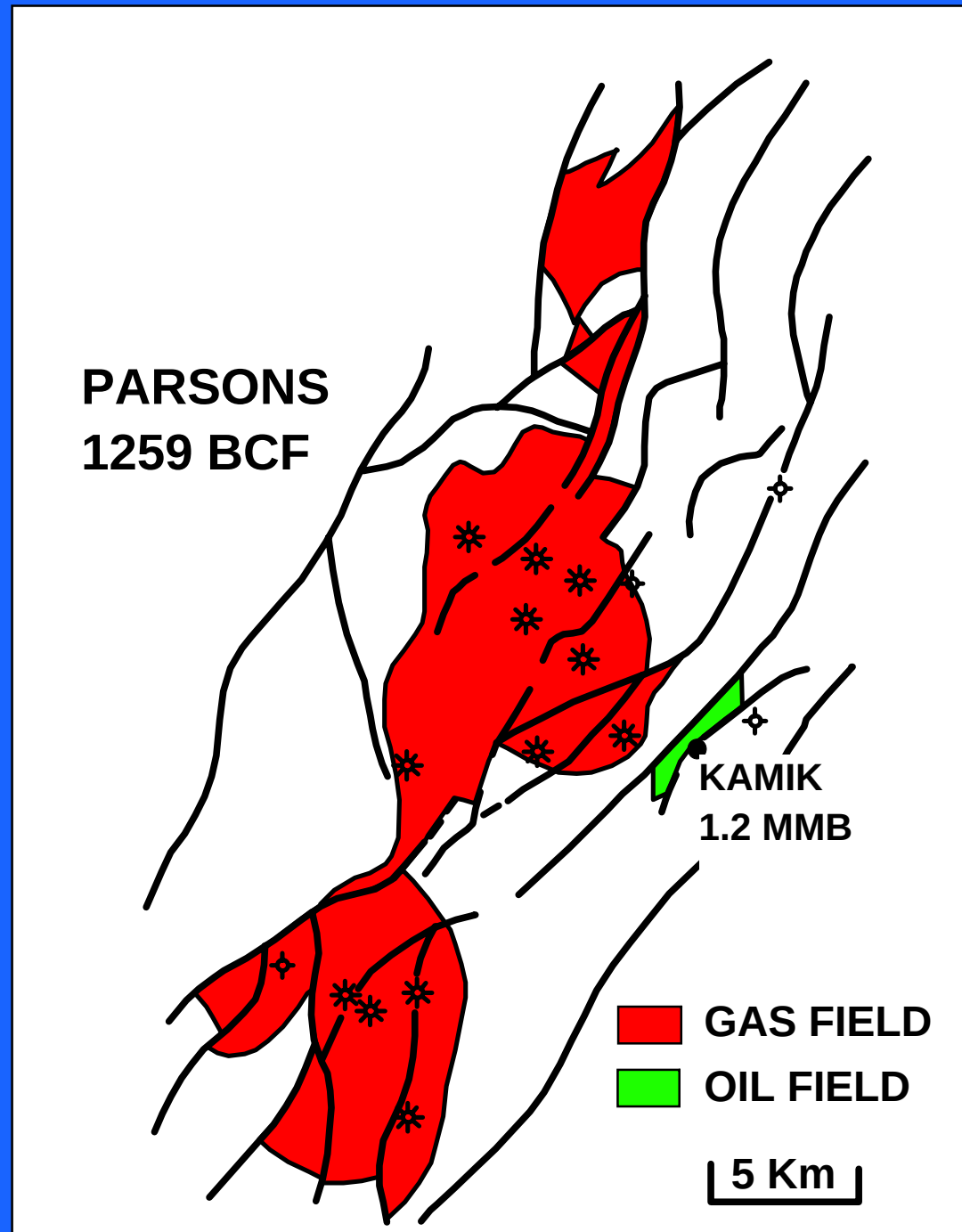
BEAUFORT-MACKENZIE BASIN

STRATIGRAPHIC POSITION OF 30 DISCOVERIES



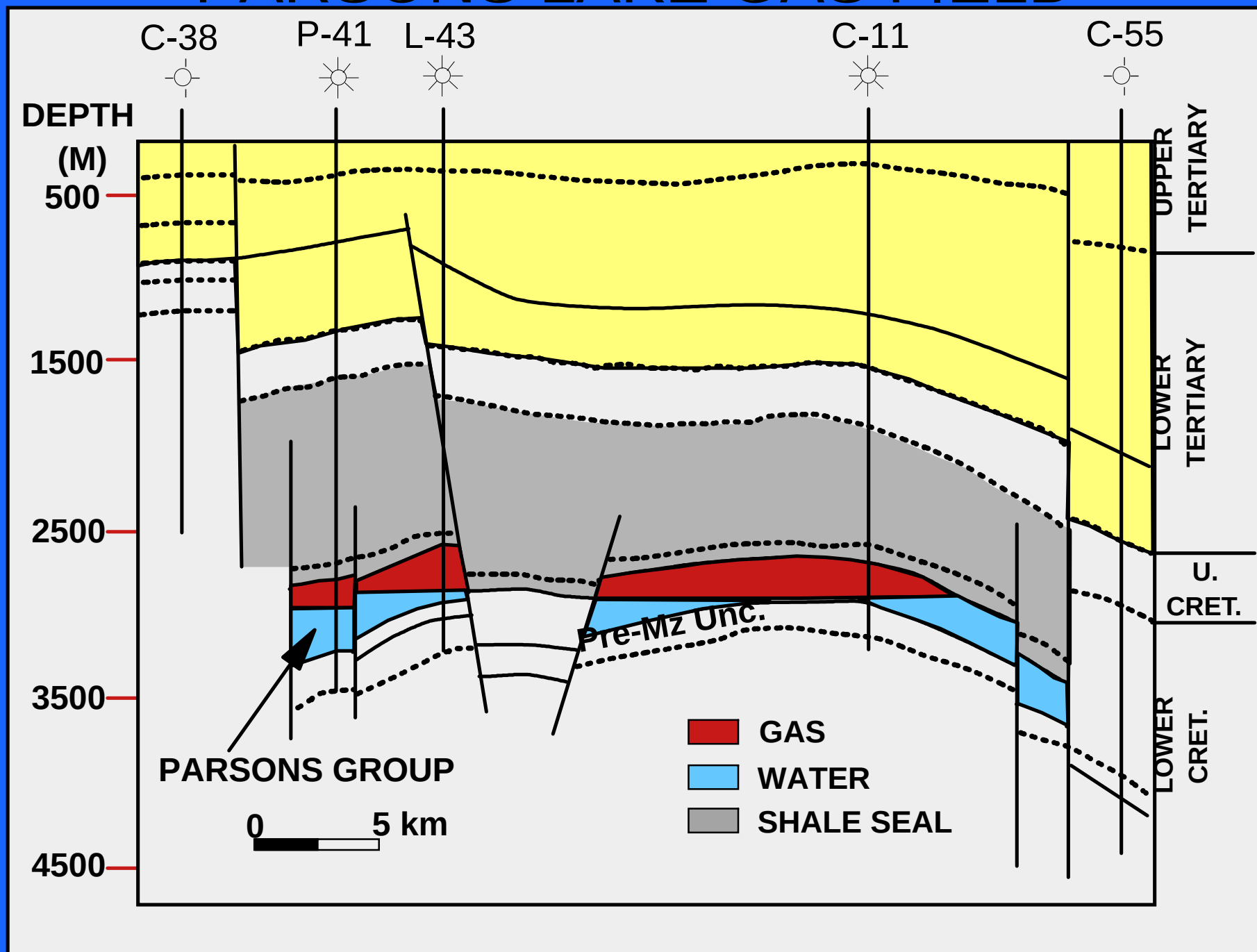
Adapted from: Hitcheon, et al, 1990

PARSONS GAS FIELD



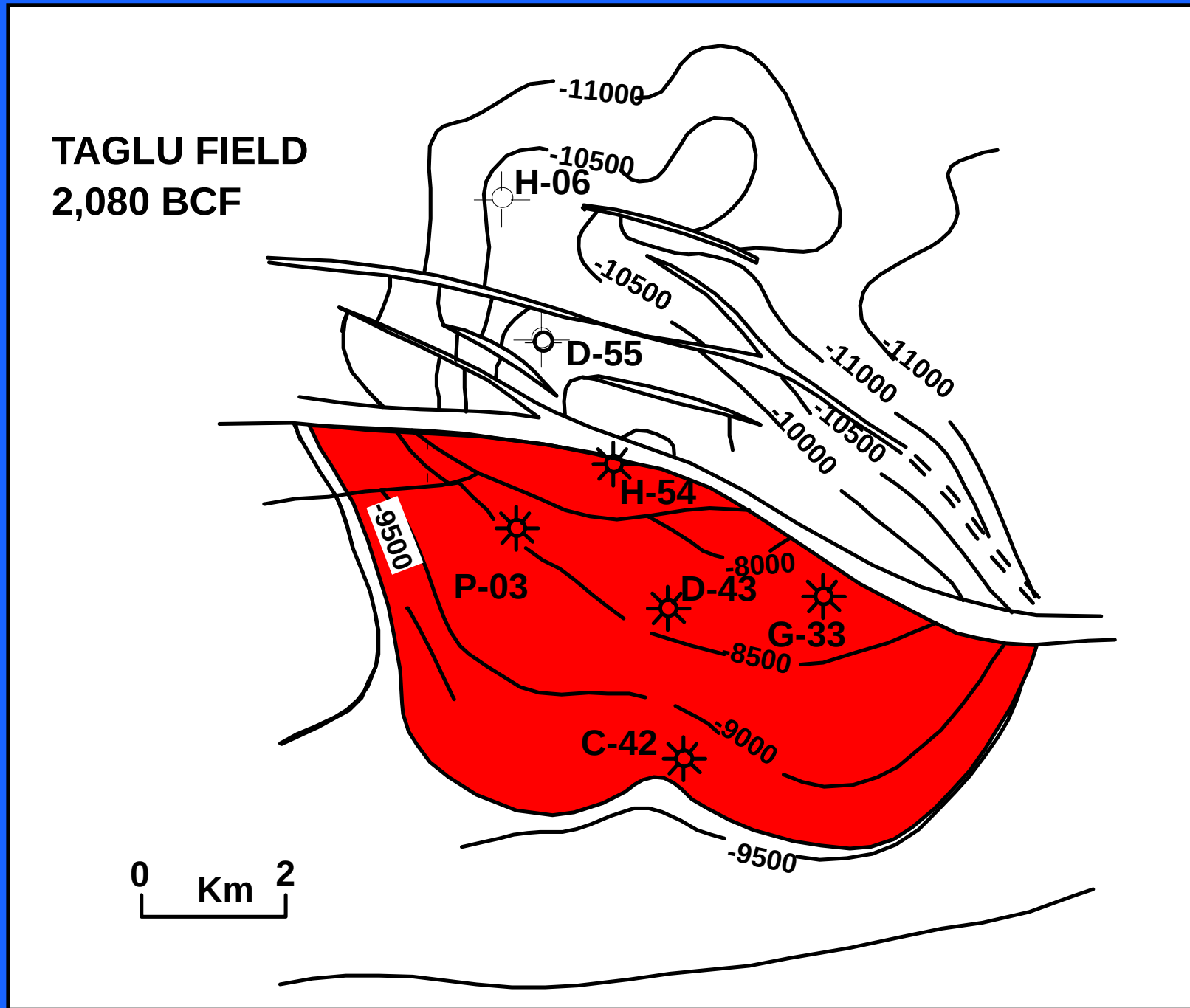
Adapted from: G.R MORRELL, 1996

PARSONS LAKE GAS FIELD



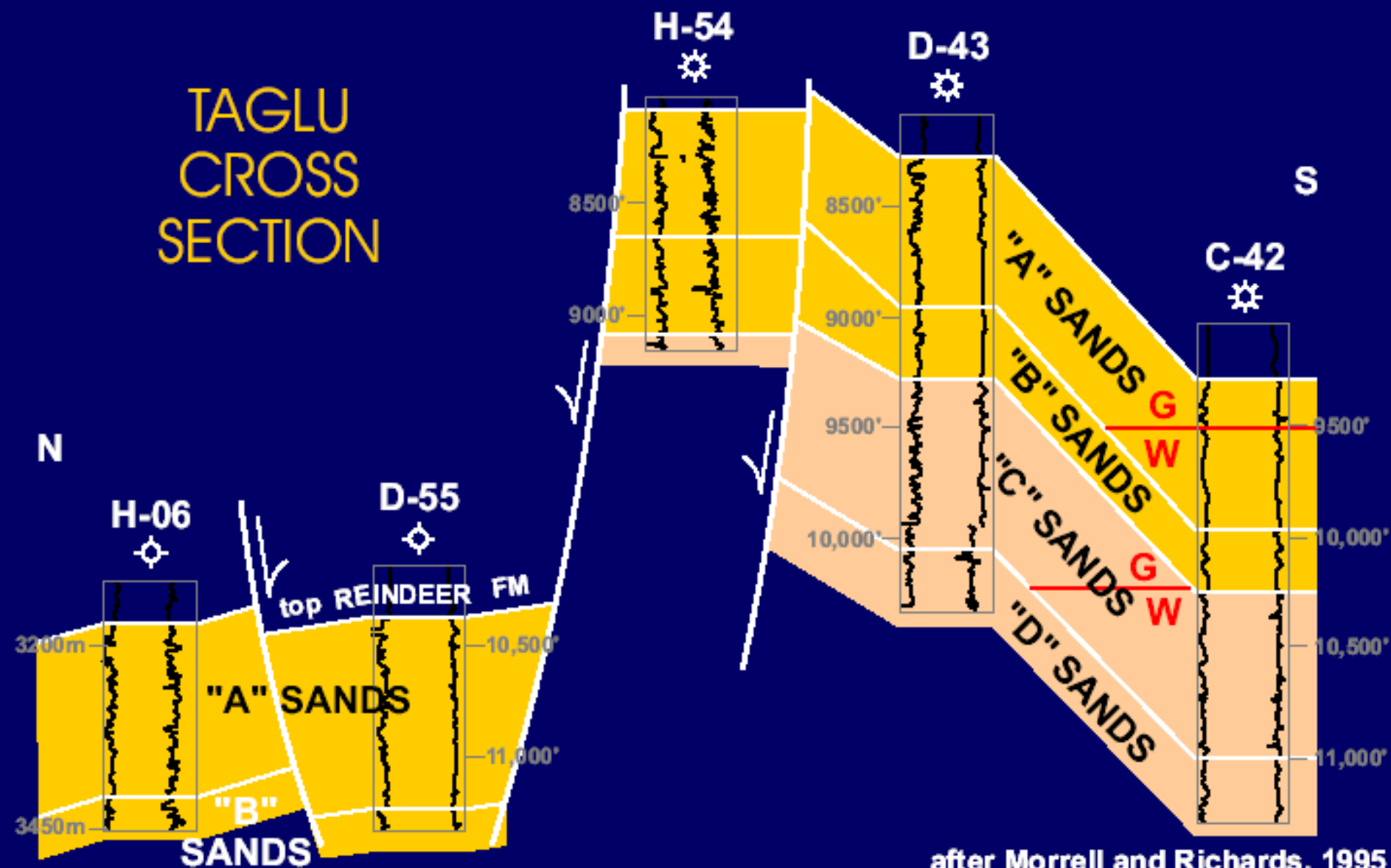
Adapted from: R.A. Meneley, 1986

TAGLU STRUCTURE CONTOUR MAP



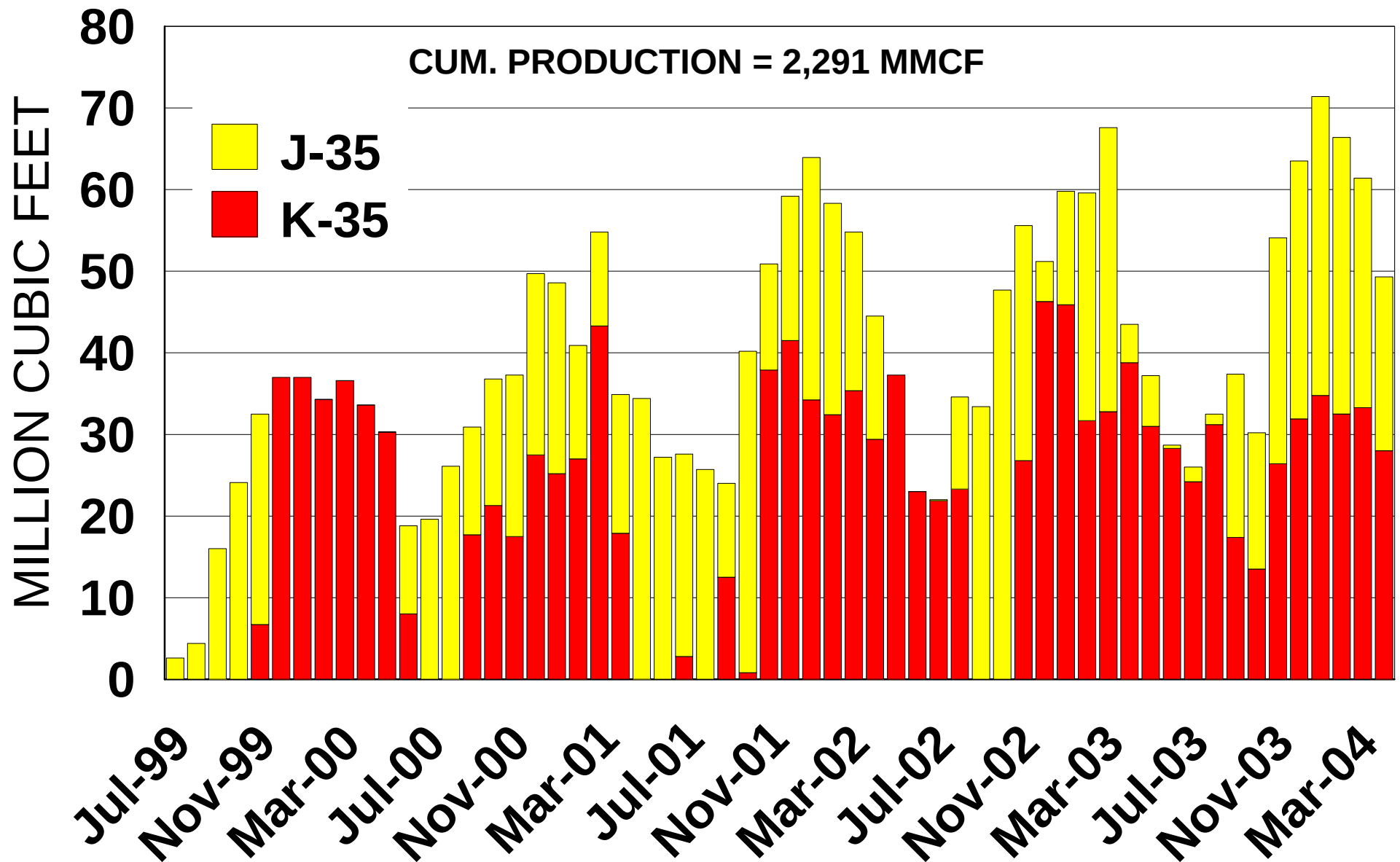
Adapted from: G.R MORRELL, 1996

TAGLU CROSS SECTION

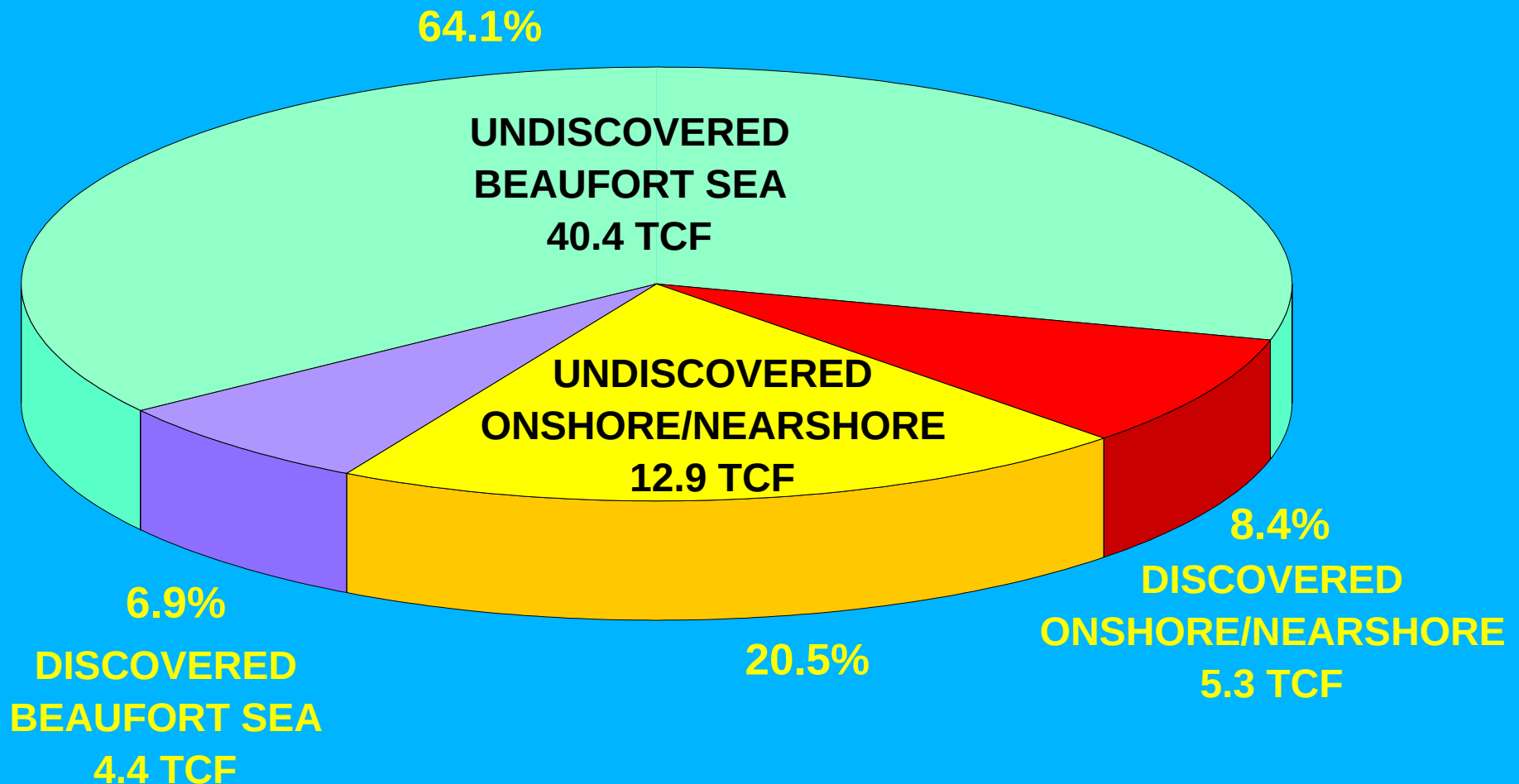


after Morrell and Richards, 1995

IKHIL GAS FIELD PRODUCTION



MACKENZIE DELTA / BEAUFORT SEA ULTIMATE RECOVERABLE GAS RESOURCE 63.0 TCF



SOURCE: DISCOVERED - NEB, 1988, UNDISCOVERED - GSC, 1994

SUMMARY - YUKON / NWT

RECOVERABLE OIL & GAS OF MAJOR AREAS

	DISCOV OIL (MMB)	UNDISCOV OIL (MMB)	DISCOV GAS (BCF)	UNDISCOV GAS (BCF)
LIARD/ S. NWT	0	0	1,371	7,292
MACKENZIE PLAIN	302	107	156	1,500
COLVILLE HILLS	0	28	620	4,586
PEEL BASIN	0	45	0	3,149
EAGLE PLAINS	12	28	84	1,103
MACKENZIE DELTA	248	1,050	5,319	12,600
BEAUFORT SEA	767	4,350	4,376	40,700
TOTAL (+ OTHERS)	1,329	5,736	11,925	74,119

CONCLUSIONS

- DISCOVERED OIL AND GAS OCCUR IN CAMBRIAN,DEVONIAN,PERMO-CARBONIF, CRETACEOUS AND TERTIARY AGE STRATA.
- MAJOR OIL DISCOVERIES IN MACKENZIE PLAIN AND THE MACKENZIE/BEAUFORT.
- MAJOR GAS DISCOVERIES IN LIARD, COLVILLE HILLS & MACKENZIE/ BEAUFORT.
- FUTURE DISCOVERIES EXPECTED IN LIARD, COLVILLE HILLS, MACKENZIE PLAIN, PEEL BASIN, EAGLE PLAIN AND MACK/ BEAUFORT.