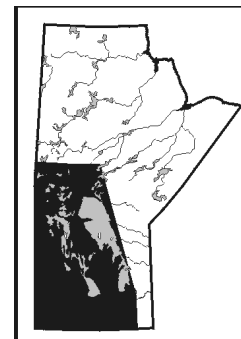


**GS-32 THE MANITOBA STRATIGRAPHIC MAP SERIES (PALEOZOIC AND MESOZOIC MAPS)  
AND THE MANITOBA STRATIGRAPHIC DATABASE: NEW AND PREVIOUSLY  
RELEASED SUBSURFACE GEOLOGICAL DATA**

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Conley, G.G. and Bezys, R.K. 1998: The Manitoba Stratigraphic Map Series (Paleozoic and Mesozoic maps) and the Manitoba Stratigraphic Database: new and previously released subsurface geological data; in Manitoba Energy and Mines, Geological Services, Report of Activities, 1998, p. 210-211.

**SUMMARY**

The Manitoba Stratigraphic Database (MSD) and thirty stratigraphic maps are presented on a CD-ROM (Bezys and Conley, in prep.). This represents the first digital release of non-confidential Paleozoic and Mesozoic subsurface geologic well data and maps for the Province.

The 24 re-digitized maps were originally published by H.R. McCabe and B. Bannatyne of the Geological Services Branch. The 6 Lower Paleozoic maps are newly designed maps compiled from the most recent subsurface data available and verified by Geological Services staff. The Devonian map series will also be re-issued after well verification has been completed in 1999-2000 (approximately 600 wells).

**MANITOBA STRATIGRAPHIC MAP SERIES**

The stratigraphic map series includes 6 new Lower Paleozoic and Precambrian maps (1:2 000 000), as well as 24 re-digitized maps (previously published maps of various scales) (Table 1). The Lower Paleozoic map series consists of the Winnipeg, Red River, Stony Mountain and Stonewall formations and the Interlake Group. The latter maps contain both structural and isopach information, as well as marginal notes, cross sections and bibliographies. These maps were created using MSD verified data and have been modified to conform to stratigraphic nomenclature established by the Western Canada Sedimentary Basin Atlas Project. These recent maps are correlatable to Saskatchewan's Lower Paleozoic series (also published at 1:2 000 000). In total, the stratigraphic map series list includes 1 Precambrian, 5 Ordovician/Silurian, 11 Devonian, 2 Mississippian, 8 Cretaceous, and 3 miscellaneous maps.

**MANITOBA STRATIGRAPHIC DATABASE**

The Manitoba Stratigraphic Database (MSD) includes stratigraphic data from oil and gas wells, government stratigraphic coreholes, mineral exploration diamond drill holes, engineering test holes, stratigraphic water well test holes and Manitoba Hydro coreholes.

Location data in the form of UTM coordinates have been generated for all of the approximately 1200 verified wells. Although the locations have been generated as accurately as possible, the quality of the data being used is highly variable and it is possible that some wells might be incorrectly located.

Although all verified wells (confidential and non-confidential) are used in the generation of the stratigraphic maps, only non-confidential data is being released to the public.

**Table 1  
Manitoba Stratigraphic Map Series**

1. <b>KB-TTM-1:</b> Upper Cretaceous and Boissevain Formation/Tertiary Turtle Mountain Formation (contour and isopach maps)	15. <b>DD-2:</b> Devonian Duperow Formation - Swan River Area
2. <b>KRM-2:</b> Cretaceous Riding Mountain Formation - Odanah Member (contour and isopach maps) (1:1 000 000)	16. <b>DSR-1:</b> Devonian Souris River Formation (contour and isopach maps) (1:1 000 000)
3. <b>KRM-1:</b> Cretaceous Riding Mountain Formation - Millwood Member (contour and isopach maps) (1:1 000 000)	17. <b>DSR-2:</b> Devonian Souris River Formation - Swan River Area
4. <b>KVR-2:</b> Cretaceous Vermillion River Formation - top of Pembina Member to base of Boyne Member (contour and isopach maps) (1:1 000 000)	18. <b>DDB-1:</b> Devonian Dawson Bay Formation (contour and isopach maps) (1:1 000 000)
5. <b>KVR-1:</b> Cretaceous Vermillion River Formation - Morden Member (contour and isopach maps) (1:1 000 000)	19. <b>DEP-1:</b> Devonian Elk Point Group (contour and isopach maps) (1:1 000 000)
6. <b>KF-1:</b> Cretaceous Favel Formation (contour and isopach maps) (1:1 000 000)	20. <b>DPE-1:</b> Devonian Prairie Evaporite Formation (contour and isopach maps) (1:1 000 000)
7. <b>KA-2:</b> Cretaceous Upper Ashville (contour and isopach maps) (1:1 000 000)	21. <b>DW-1:</b> Devonian Winnipegosis Formation (contour and isopach maps) (1:1 000 000)
8. <b>KA-1:</b> Cretaceous Lower Ashville (contour and isopach maps) (1:1 000 000)	22. <b>DA-1:</b> Devonian Ashern Formation (contour and isopach maps) (1:1 000 000)
9. <b>PC-2:</b> Pre-Mississippian Oil Show Map	23. <b>SI-1:</b> Silurian Interlake Group (contour and isopach maps) (1:2 000 000)
10. <b>M-2:</b> Mississippian Erosion Surface (contour and isopach maps) (1:1 000 000)	24. <b>ORR-1:</b> Ordovician Red River Formation (contour and isopach maps) (1:2 000 000)
11. <b>M-1:</b> Mississippian Madison Group (isopach map) (1:1 000 000)	25. <b>OSM-1:</b> Ordovician Stony Mountain Formation (contour and isopach maps) (1:2 000 000)
12. <b>D-M-1:</b> Devonian-Mississippian Lyleton and Bakken formations (contour and isopach maps) (1:1 000 000)	26. <b>OS-1:</b> Ordovician (and Silurian) Stonewall Formation (contour and isopach maps) (1:2 000 000)
13. <b>DN-1:</b> Devonian Nisku Formation (=Birdbear) (contour and isopach maps) (1:1 000 000)	27. <b>OW-1:</b> Ordovician Winnipeg Formation (contour and isopach maps) (1:2 000 000)
14. <b>DD-1:</b> Devonian Duperow Formation (contour and isopach maps) (1:1 000 000)	28. <b>PC-1:</b> Precambrian (structure contour and depth to Precambrian maps) (1:2 000 000)
	29. <b>P-2:</b> Paleozoic Erosion Surface-Swan River Area (detailed subcrop-structure contour map)
	30. <b>P-1:</b> Paleozoic Erosion Surface (subcrop and outcrop structure contour maps) (1:1 000 000)

## FUTURE PLANS

The CD-ROM represents the initial release of Manitoba Stratigraphic Data by Geological Services Branch. It is intended that MSD will be constantly updated as blocks of new data become available. The first planned major update is to include all of the historical data generated by H.R. McCabe. Although this data is currently in digital format, it requires extensive checking before it can be released. This release is anticipated early in 1999. The second major update will be made available once the core storage database has been updated to include new wells drilled in 1997/98. The third planned update will contain detailed log descriptions compiled by R.K. Bezys. A fourth planned update will follow the completion of the verification of the Devonian wells and will include digital copies of the Devonian Stratigraphic Maps.

MSD updates will be made available via the Department's web site. Because minor corrections will be made to any and all data as necessary, the only way to guarantee that all users have the most accurate data is to re-release the entire database with each update.

## REFERENCES

- Bezys, R.K. and Conley, G.G.  
in prep.: The Manitoba Stratigraphic Map Series (Paleozoic and Mesozoic maps) and the Manitoba Stratigraphic Database: new and previously released subsurface geological data; Manitoba Energy and Mines, Open File Report OF98-7, 30 maps and database on CD-ROM.