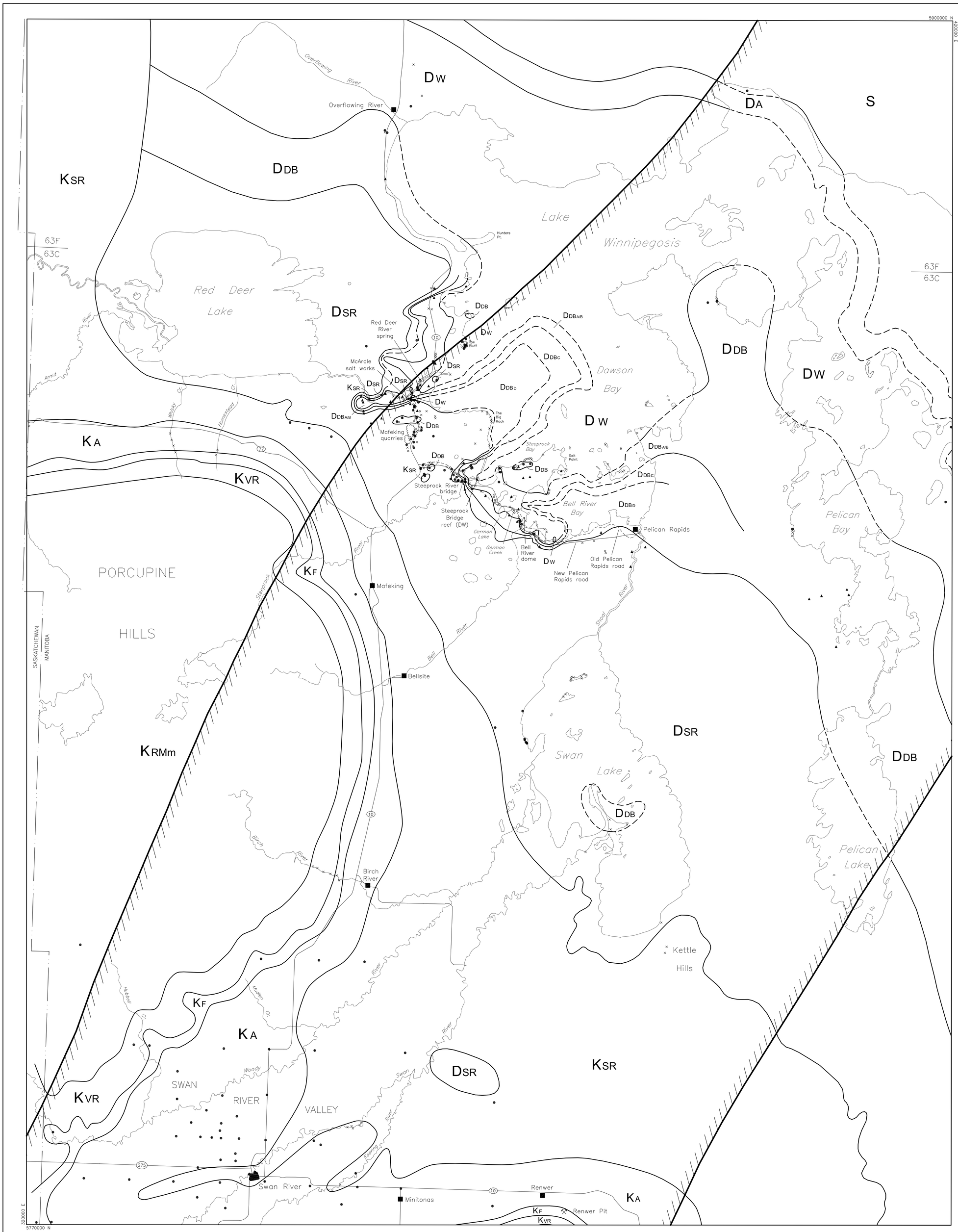


GEOLOGY

Mesozoic

Upper Cretaceous

KRMm — Riding Mountain Formation
Millwood Member: soft greenish bentonitic shale.

KVR — Vermilion River Formation
Morden Member: black carbonaceous shale.
Boyne Member: grey calcareous speckled shale and carbonaceous shale. Pembina Member: thinly interbedded.
Pembina Member: thinly interbedded carbonaceous shale, bentonite, and bentonitic shale.

KF — Favel Formation: calcareous speckled shale (Second Specks); minor limestone, bentonite and oil shale.

Upper and Lower Cretaceous

KA — Ashville Formation: dark grey carbonaceous shale, in part bituminous; minor sand, silt and bentonite.

Lower Cretaceous

KSR — Swan River Formation: sandstone, in places glauconitic; kaolinitic shale, minor lignite.

Paleozoic

Upper and Middle Devonian

DSR — Souris River Formation, Point Wilkins Member
Dolomitic Limestone Beds: finely granular dolomitic limestone and limestone.
Micritic Limestone Beds: resistant, thick bedded, micritic and pelletoid limestone and some minor dolomitic limestone.
Argillaceous Limestone Beds: thin bedded argillaceous limestone with shaly partings, and some pelletoid limestone.
First Red Beds: red and green calcareous and noncalcareous shale, some thin interbeds of argillaceous dolomite; some beds brecciated; barren of fossils.

Middle Devonian

DDB (D / C / B / A) — Dawson Bay Formation
Member D (upper): saccharoidal and fragmental limestone commonly containing numerous stromatoporoids.
Member C (middle): argillaceous limestone and calcareous shale, generally richly fossiliferous.
Member B (lower): biofragmental limestone with abundant fossils, argillaceous and dolomitic limestone and nodular limestone with shale partings.
Second Red Beds (Member A): noncalcareous red and green shale with some interbeds of argillaceous limestone and limestone; unfossiliferous; commonly brecciated.

Winnipegosis Formation

DW — Upper Member: thin interreef bituminous laminates or thick reefal carbonate.
Lower Member: dolomitized platform facies.

DA — Ashern Formation: dolomitic shale and argillaceous dolomite, red to greenish grey; local basal breccia.

Silurian

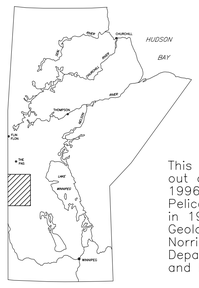
S — Interlake Group: micritic, fossiliferous, stromatolitic and biostromal dolomites with several sandy argillaceous marker beds.

SYMBOLS

- Geological contact (defined, assumed)
- Superior Boundary Zone (west and east boundaries)
- Saline spring
- Outcrop
- Quarry or pit
- Drillhole

Data compiled by: R.K. Bezys, J.D. Bamburak and G.G. Conley

Cartography by: M.E. McFarlane and E. Truman



This map is a summary of work carried out during the summer field seasons of 1996 and 1997. Saline springs along Pelican Bay were inventoried by S.E. Grosby in 1999 (Geological Survey of Canada). Geological contacts are based on maps by Norris et al. (1982) and the Manitoba Department of Mines, Natural Resources and Environment (1979).

0 5 10 15 20km

1:150 000

To accompany Manitoba Geological Survey, Geoscientific Report GR2004-1

Figure 1: Geology of the Dawson Bay - Swan River area of west-central Manitoba, showing outcrops, brine springs and coreholes.