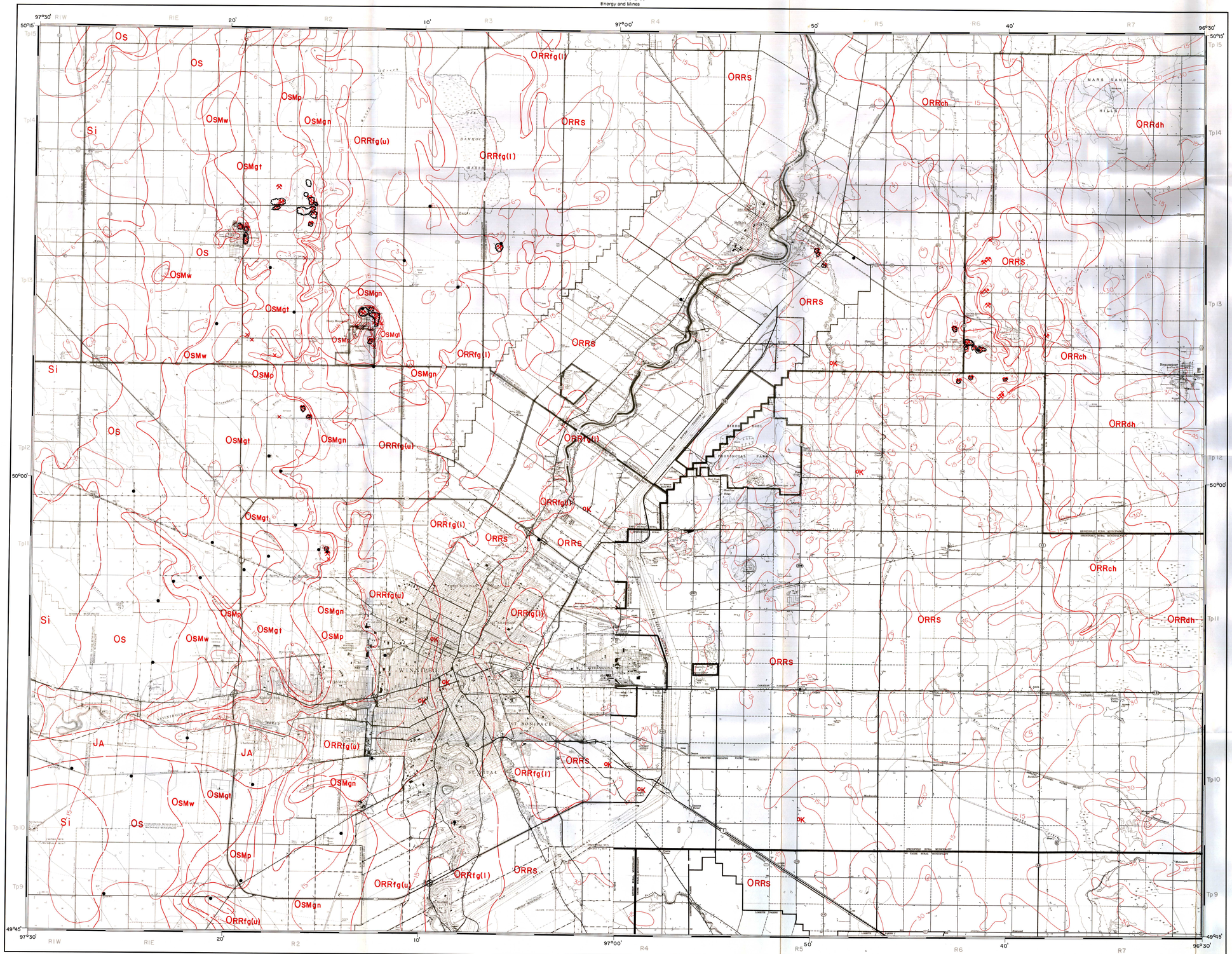
Manitoba
Energy and Mines



LEGEND

MESOZOIC

CRETACEOUS

oK — SWAN RIVER GROUP: white kaolinitic shale, silica sand and/or black lignitic silty material; in solution cavity or channel: isolated occurrence

JURASSIC

JA — AMARANTH FORMATION: lower red beds of shale and sandstone containing masses of gypsum; upper interbedded red shale and white gypsum containing fragments of buff dolomite

PALEOZOIC

SILURIAN

Si — INTERLAKE GROUP: dolomite, aphanic, stromatolitic, fragmental fossiliferous; thin argillaceous and arenaceous marker beds

ORDOVICIAN AND SILURIAN

Os — STONEWALL FORMATION: dolomite, finely crystalline to aphanic; reefoid in part; slightly mottled in part; arenaceous and argillaceous marker bed near middle

ORDOVICIAN

STONY MOUNTAIN FORMATION:

OSMw — WILLIAMS MEMBER: dolomite, arenaceous and argillaceous

OSMgt — GUNTON MEMBER: dolomite, mottled buff and grey; slight but variable argillaceous content

OSMp — PENITENTIARY MEMBER: dolomite, argillaceous, vuggy, fossiliferous

OSMgn — GUNN MEMBER: calcareous shale, red and purple, fossiliferous; thin limestone interbeds

RED RIVER FORMATION:

ORRfg(u) / **ORRfg(l)** — FORT GARRY MEMBER: (upper part): dolomite, in part cherty; limestone beds of variable thickness near base and at top of subunit (lower part): dolomite, aphanic; marker bed of red argillaceous intraformational breccia at top of subunit

ORRs — SELKIRK MEMBER: dolomitic limestone, mottled, fossiliferous; upper limestone layer with abundant chert nodules

ORRch — CAT HEAD MEMBER: dolomite to dolomitic limestone

ORRdh — DOG HEAD MEMBER: dolomitic limestone, mottled

SYMBOLS

- Depth to bedrock contours. Note irregular contour intervals: 3,6,15,30,and 45 m.
- Geological contact
- Drill hole, core available
- Bedrock quarry
- Outcrop

NOTES:

The purpose of this map is to outline geological formations in the area, and to indicate where bedrock is either exposed (outcrops and quarries), or near surface. It should not be used to estimate depth to bedrock for construction or engineering projects. The user is cautioned that additional near-surface occurrences and outcrops probably are present in the area. Also, it is to be expected that some areas indicated as near-surface bedrock may have locally thick overburden. Detailed exploration is advisable before any quarry is opened.

Karsting is known to affect the bedrock surface in most of the area, and numerous infills of sandy, carbonaceous and/or kaolinitic Mesozoic (Cretaceous?) sediments have been reported. An elongate outlier of Jurassic strata consisting of red beds with gypsum is present in the Headingley-Charleswood area.

The map is derived primarily from earlier versions published as Preliminary Maps DR-1 to DR-8 (Bannatyne and Jones, 1979). Those maps show "Overburden Thickness" (Maps 1, 3, 5 and 7) and "Geology and Bedrock Topography" (Maps 2, 4, 6 and 8) at a scale of 1:50 000; they are available from Manitoba Energy and Mines, 555-330 Graham Avenue, Winnipeg, Manitoba R3C 4E3.

The sources of information include:

1. Drill core from industrial mineral companies, Manitoba Energy and Mines, Department of Highways, and Earth Physics Branch, Ottawa.
2. Water well data from drill logs on file at Manitoba Water Resources.
3. Miscellaneous well logs on file, Manitoba Energy and Mines.
4. Aggregate resource studies of the Winnipeg-Stonewall area by Underwood McLellan and Associates Limited Group (1976) and J.F. MacLaren Ltd. (1980). A seismic survey of part of that region was contracted to UMA Group during the present study.
5. A geotechnical study of the Winnipeg area, by Baracos et al. (1983).

Data compilation has been updated to January, 1984.

REFERENCES:

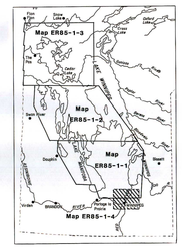
Bannatyne, B.B. and Jones, C.W.
1979: Overburden thickness: Winnipeg; Dugald; Selkirk; and Stonewall; Manitoba Mineral Resources Division Preliminary Maps DR1979-1, -3, -5, -7.

1979: Geology and bedrock topography: Winnipeg, Dugald, Selkirk; and Stonewall; Manitoba Mineral Resources Division, Preliminary Maps DR1979-2, -4, -6, -8.

Baracos, A. Shields, D.H., and Kjartansen, B., ed.
1983: Geological engineering maps and report for urban development of Winnipeg; Department of Geological Engineering, University of Manitoba.

J.F. MacLaren Ltd.
1980: Mineral aggregate study of the southern Interlake region; contracted report for: Manitoba Mineral Resources Division.

Underwood McLellan & Associates Limited
1976: Aggregate resources of the Winnipeg region; contracted report for: Manitoba Mineral Resources Division.



Map ER85-1-4 (to accompany Economic Geology Report ER85-1)

DOLOMITE RESOURCES OF THE WINNIPEG-GARSON-STONEWALL AREA:

Geology by B.B. Bannatyne

Cartography by C. Sandy

Scale 1:100 000

KILOMETRES 2 0 2 4 6 8 10 KILOMETRES