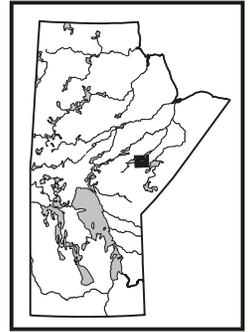


by M.A.F. Fedikow and E. Nielsen



Fedikow, M.A.F. and Nielsen, E. 1999: Operation Superior: multimedia geochemical surveys in the Knee Lake greenstone belt, northern Superior Province, Manitoba (NTS 53L); in Report of Activities 1999, Manitoba Industry, Trade and Mines, Geological Services, p. 67-68.

SUMMARY

During the months of June, July and August, 1999 rock, till, b-horizon, humus and vegetation samples were collected for multielement geochemical analyses from 308 sites within the southern portion of the Knee Lake greenstone belt. In addition, 251 bulk samples of till were collected for kimberlite indicator mineral identification and analysis and a further 250 till samples were collected for metamorphosed massive sulphide and magmatic sulphide indicator mineral analysis. The geochemical and mineralogical analysis of these samples will continue to build a multielement - multimedia geochemical database that was initiated in 1996 and continued in 1997 and 1998 (Fedikow et al., 1996, 1997a, b; Fedikow and Nielsen, 1997; Fedikow et al., 1998, 1999) to assist mineral resource assessment in the northern Superior Province of Manitoba.

1999 SURVEY

Year four of a five-year, helicopter and fixed-wing assisted, belt scale (1 km sample spacing), multimedia geochemical survey in northeastern Manitoba was concentrated in the southern portion of the Knee Lake greenstone belt (Fig. GS-16-1). The distribution of sampling sites for the 1999 survey is given in Figure GS-16-2. Sample collection in 1999 was accomplished by helicopter and boat so that the extensive shoreline of Knee Lake could be sampled. Samples are currently undergoing preparation for geochemical analysis in the laboratories of the Geological Services Branch.

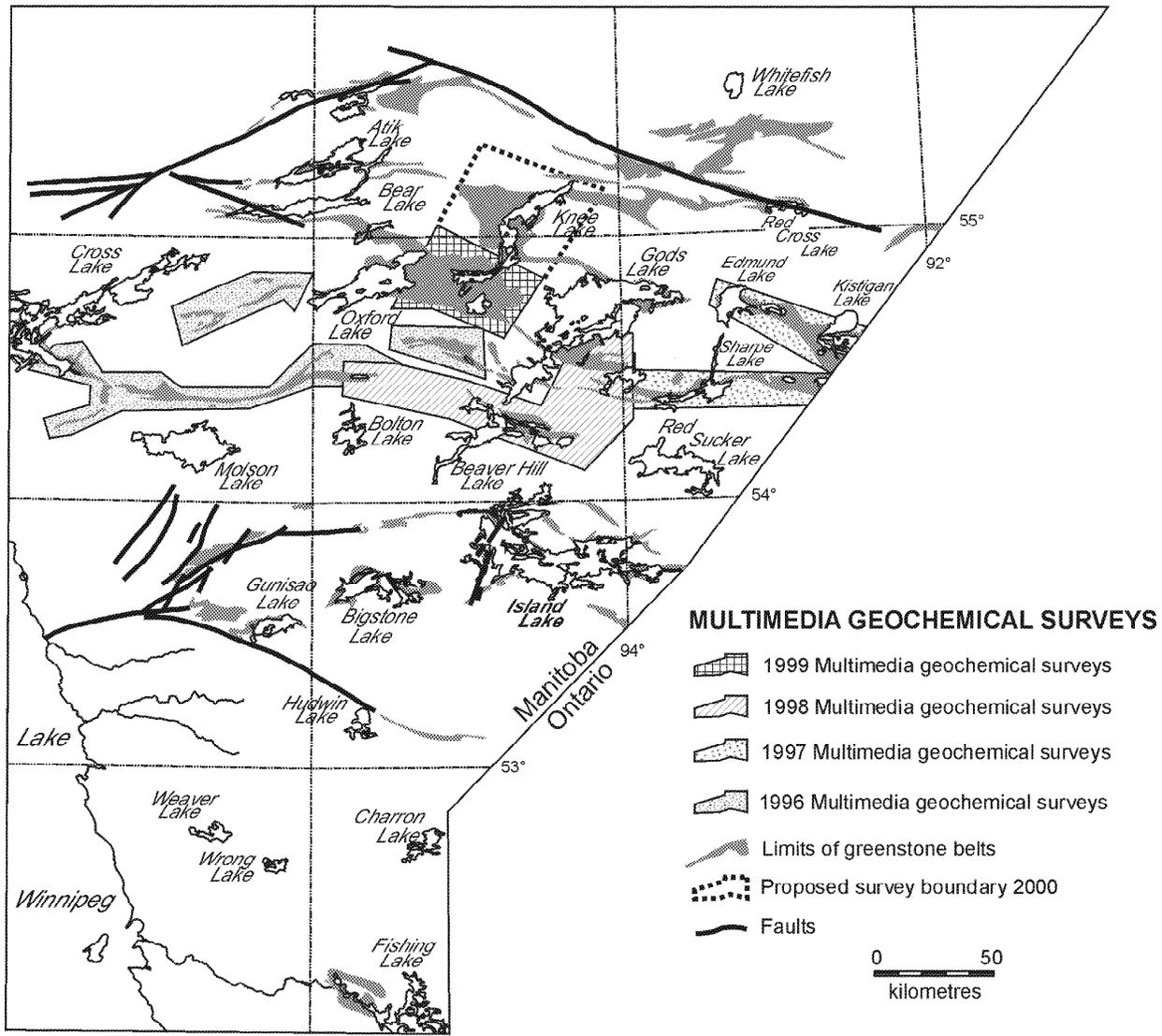


Figure GS-16-1: Target area for the 1999 multimedia geochemical survey.

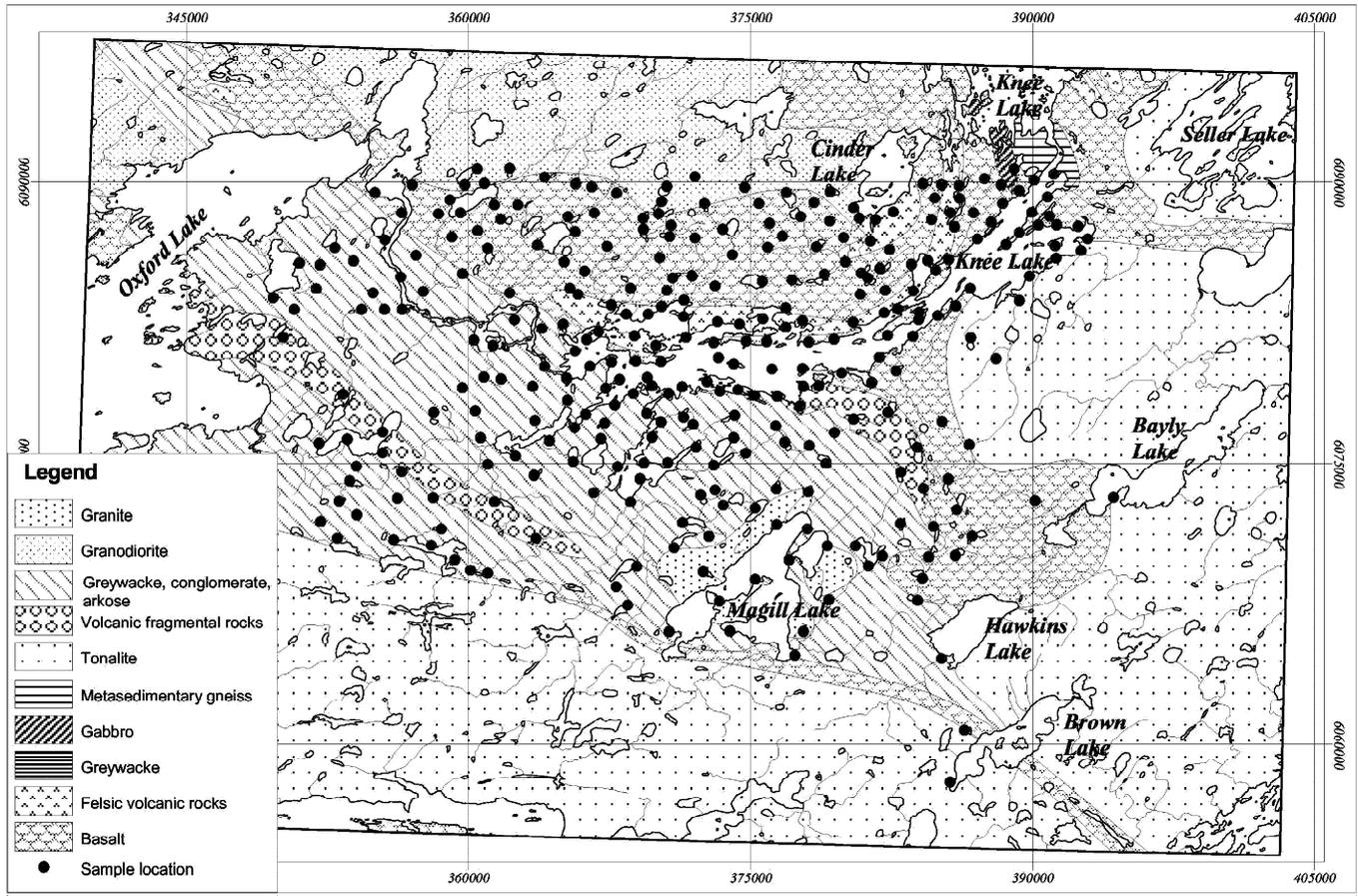


Figure GS-16-2: Distribution of sampling sites in the 1999 survey area.

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