

Nova Scotia Gold Grain Study: 2008 Results

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Introduction

During the 2008 field season, four 10 kg till samples were collected from mainland Nova Scotia. The samples were collected as part of the Nova Scotia Gold Grain Study, which commenced during the 2004 field season. The sampling and laboratory methodologies used in this study are consistent with previous sampling programs described by Goodwin (2005, 2006, 2007 and 2008). The 2008 samples were collected at the

same locations as soil samples for the North American Soil Geochemical Landscapes Project (Goodwin *et al.*, 2009).

Methods

Sample locations for the four samples (GGS2008 - 01 to GGS2008 - 04) collected during the 2008 field season are shown on Figure 1 and sample coordinates (UTM 20T, NAD83) are tabulated in Table 1. The four samples were processed by

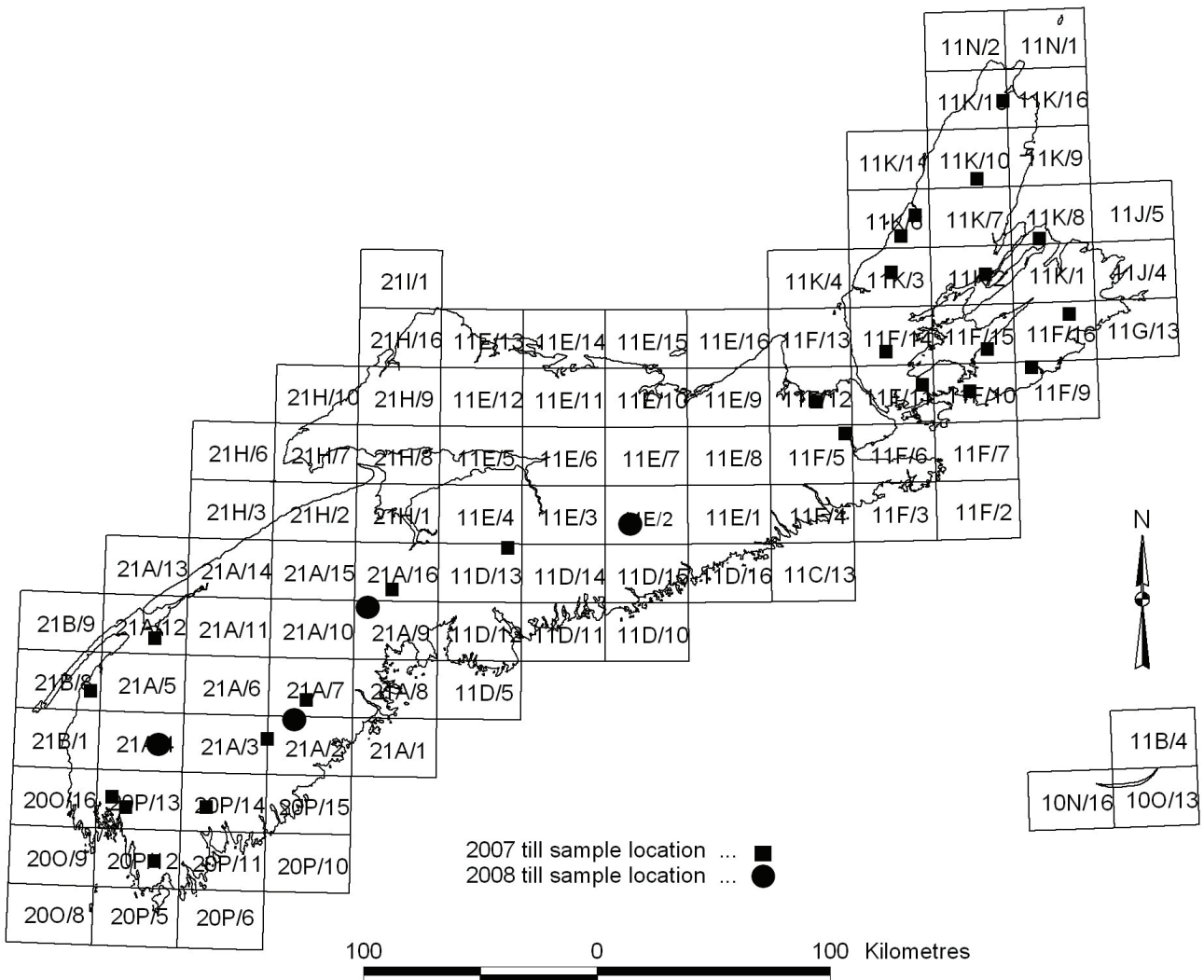


Figure 1. Sample locations for till samples (filled circles) collected during the 2008 field season for the Nova Scotia Gold Grain Study. For reference only, the filled squares are the 2007 sample locations.

Overburden Drilling Management (ODM) of Nepean, Ontario.

All till samples were interpreted to be locally derived because (1) the vast majority of the clasts recovered from each till pit reflected the underlying bedrock geology and (2) the till matrix reflected the composition of the local bedrock (Table 1). Clasts were dominantly angular to subangular indicating minimal transport by glacial ice and, therefore, proximity to the bedrock source.

Results

No gold grains were reported in any of the four

regional till samples collected during 2008 (Table 2). This is consistent with previously established regional background gold grain counts (from 0-3 gold grains) for Nova Scotia (Goodwin, 2005, 2006, 2007 and 2008). As in the past, the data have not been normalized to sample weight(s), therefore, the background range is based on raw sample field weights.

Tabulated weights for the bulk till sample, table split, >2 mm size fraction, table feed as well as the magnetic and nonmagnetic fractions of the heavy mineral concentrate are presented in Table 3.

Table 1. UTM (Zone 20T, NAD83) co-ordinates for till samples collected during the 2008 field season for the Nova Scotia Gold Grain Study.

Sample #	UTM-E83	UTM-N83	Location	Till Unit Description*
GG2008 - 01	288349	4888058	mainland Nova Scotia	Stony till plain
GG2008 - 02	352865	4899721	mainland Nova Scotia	Stony till plain
GG2008 - 03	512133	4992344	mainland Nova Scotia	Stony till plain
GG2008 - 04	387697	4953157	mainland Nova Scotia	Stony till plain

*Till unit description after Stea *et al.* (1992).

Table 2. Summary of the number of recovered visible gold grains and the calculated content (ppb) of visible gold in the heavy mineral concentrate (HMC) for the 2008 till samples.

Sample #	Number of Visible Gold Grains				Calculated (ppb) Visible Gold in HMC			
	Total	Reshaped	Modified	Pristine	Total	Reshaped	Modified	Pristine
GG2008-01	0	0	0	0	0	0	0	0
GG2008-02	0	0	0	0	0	0	0	0
GG2008-03	0	0	0	0	0	0	0	0
GG2008-04	0	0	0	0	0	0	0	0

Table 3. Summary of the sample weights at the various processing stages for the 2008 till samples.

Sample #	Weight (kg wet)				<2.0 mm Table Concentrate Weight (g dry) Heavy Liquid Separation (S.G. 3.3)				
	Bulk Rec'd	Table Split	>2.0 mm Clasts	Table Feed	HMC				
					Total	Lights	Total	Nonmag	Mag
GG2008-01	10.9	10.1	2.2	7.9	424.1	417.2	6.9	6.9	0.02
GG2008-02	10.3	9.5	2.5	7.0	305.0	255.4	49.6	49.5	0.10
GG2008-03	9.9	9.1	0.9	8.2	418.0	406.4	11.6	11.1	0.50
GG2008-04	10.3	9.5	3.0	6.5	331.2	329.4	1.8	1.6	0.20

References

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