GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA Natural Resources Ressources naturelles Canada D. AUDS ON Copies of this map may be obtained from the Geological Survey of Canada: 601 Booth Street, Ottawa, Ontario K1A 0E8 3303-33rd Street, N.W., Calgary, Alberta T2L 2A7 101-605 Robson Street, Vancouver, B.C. V6B 5J3 MAP 2045A SURFICIAL GEOLOGY **WIGHT INLET** Geology by D.A. Hodgson, 1995–1997, 1999 Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada **BAFFIN ISLAND** Digital map compilation by D.A. Hodgson, 1997–2002 Digital base map from data compiled by Geomatics Canada, modified by ESS Info NUNAVUT Digital cartography by E. Everett, Earth Sciences Sector Information Scale 1:100 000/Échelle 1/100 000 Mean magnetic declination 2003, 32°15'W, decreasing 22.2' annually. Readings Division (ESS Info) vary from 31°45'W in the SW corner to 32°43'W in the NE corner of the map This map was produced from processes that conform to the ESS Info Publishing Services Subdivision Quality Management System, Ottawa, registered Elevations in metres above mean sea level Projection transverse universelle de Mercator Universal Transverse Mercator Projection to the ISO 9001: 2000 standard North American Datum 1927 Système de référence géodésique nord-américain, 1927 © Her Majesty the Queen in Right of Canada 2003 © Sa Majesté la Reine du chef du Canada 2003 LOCATION MAP

LEGEND

This legend is common to maps 2042A, 2043A, 2044A, 2045A, 2046A, 2047A, and 2048A. Coloured legend blocks indicate map units that appear on this map. Not all map symbols shown in the legend appear on this map.

QUATERNARY HOLOCENE FLUVIAL DEPOSITS (nonglacial alluvial floodplain, terrace, fan, and delta topsets): gravel, sand, boulders, minor silt, and muck; 1-10 m thick; deposited in braidplains.

MARINE DEPOSITS: sediments deposited during postglacial regression of a high

Marine veneer: sand, silt, and gravel; 0.5-2 m thick; discontinuous cover of littoral and offshore sediment including beach ridges and sea-ice-rafted debris; mimics surface of

underlying till or rock. Fine-grained sediment bears a continuous vegetation cover patterned with subparallel rills. GLACIAL MARINE DEPOSITS: sand, silt, gravel, and boulders; 2-30 m thick;

deposited in the high proglacial sea. Glacial marine delta: sand, silt, boulders, and gravel; 2-20 m thick; massive to

termination of outwash trains or meltwater channels. Glacial marine blanket: sand, silt, minor gravel, and dropstones; 2-30 m thick; deposited from suspension and iceberg rafting; locally capped by Holocene marine

GLACIOFLUVIAL DEPOSITS: gravel and sand; 1-30 m thick; deposited by meltwater

crossbedded sediments that coursen upwards in ice-contact deposits or at

behind, at, and in front of ice margins. $\textbf{Glaciofluvial outwash:} \ \text{stratified gravel and sand;} \ 1-30 \ m \ thick; \ proglacial \ floodplains,$ terraces, and fans; includes kame terraces, minor subglacial and subaquatic

deposits, glacial lacustrine channelled deltas and fans; locally kettled; grade to glacial marine deltas at marine limit; may include washed till surfaces with few fines. Glaciofluvial ice-contact deposits (eskers and kames): poorly stratified to sorted gravel, sand, and boulders; 5–20 m thick; forming ridges and hummocks.

EARLY HOLOCENE AND WISCONSINAN

TILL: clast-supported silty sand, dominantly cobble- and boulder-size igneous and metamorphic clasts; 0.5–20 m thick; deposited in subglacial and ice-marginal environments of local ice caps (Meta Incognita Peninsula) and of the Foxe Ice Dome (Amadjuak Ice Divide). Minor silty till deposited on Hudson Strait coast by Labrador (i.e. trans-strait) and central Laurentide (i.e. down-strait continental outlet) ice.

Hummocky till: diamicton which may be underlain by remnant glacier ice; 1-20 m thick; rolling to hummocky; mainly in Frobisher Bay moraines.

Till blanket: diamicton; 1–10 m thick; undulating plain with minor fluted, hummocky,

ridged, ribbed, or channelled areas; solifluction lobes on steeper slopes; thick end moraines; minor till veneer or glaciofluvial outwash; rare glaciolacustrine fines. Till veneer: diamicton; 0.5-2 m thick; >40% of area is till, <60% of area is rock ledges

and knobs, and rubble; bedrock topography is evident; minor till blanket, minor colluvium, including talus, colluvial fans, solifluction lobes, and undifferentiated valley-bottom deposits; minor washed-till boulder fields.

QUATERNARY AND PRE-QUATERNARY

BEDROCK AND ROCK WEATHERING PRODUCTS: intact and frost-riven outcrop, discontinuous cover of rubble, boulders, gravel, sand, and minor silt; glacially scoured to frost-rived or disaggregated outcrop; <40% till and boulder fields (including till from which finer fraction was washed by glacial meltwater or a higher sea), and colluvium; very minor fluvial deposits, muck, or raised marine nearshore and shoreline deposits. Topography variable from rolling to rough with some major and numerous minor ridges and scarps. Vegetation continuous to absent, low Arctic to mid-Arctic, depending on substrate, exposure, and elevation. Subdivided by M.R. St-Onge by resistance to weathering, least to most: units OI, Ps, Pc, APt, and Pg.

Clastic metasedimentary rocks of Paleoproterozoic Sugluk and Lake Harbour groups and Blandford Bay assemblage.

Marble of Paleoproterozoic Lake Harbour Group.

Tonalite-monzogranite orthogneiss of Archean Superior Province and of Paleoproterozoic Narsajuag arc and Ramsey River.

Monzogranite of Paleoproterozoic Cumberland batholith.

Assumed ice margin (readvance/recessional); thick till on proximal side Subaqueous push moraine (De Geer moraine) Subglacial or proglacial meltwater outlet (flow direction known, unknown) . Limit of marine inundation, interpolated where data permits

REFERENCE

St-Onge, M.R., Scott, D.J., and Wodicka, N. 1999: Geology, Wight Inlet, Nunavut; Geological Survey of Canada, Map 1982A, scale 1:100 000.

Map no	o. Age ¹	Lab. identification	Elev. (m)	Material
1	>43 500	AA-7901	-5	Mollusc
2	40 360 ± 1450	AA-11453	65	Mollusc
3	38 745 ± 1180	AA-11452	74	Mollusc
4	34 880 ± 760	AA-11451	83	Mollusc
5	30 390 ± 450	AA-10252	56	Mollusc
6	30 200 ± 1500	GSC-414	66–72	Molluscs
7	8360 ± 65	AA-10645	19	Mollusc
8	7690 ± 90	GSC-5526	12	Molluscs
9	7645 ± 60	AA-10649	16	Mollusc
ale 1	Summary of radiocarbon dates ¹ For nonmarine material, the normalized			

Table 1. Summary of radiocarbon dates. ¹For nonmarine material, the normalized age (machine age corrected to a d¹3C = -25‰) is given where available, otherwise the uncorrected age is given. For marine organisms, where the isotopic ratio is known the age is corrected following GSC convention to a d13C = 0‰, which is equivalent to subtracting a marine reservoir effect of 400 years from a normalized age; otherwise the uncorrected age (which incorporates the marine reservoir effect) is given.

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

Recommended citation: Hodgson, D.A. 2003: Surficial geology, Wight Inlet, Baffin Island, Nunavut; Geological

Survey of Canada, Map 2045A, scale 1:100 000.

