TERRAIN CHARACTERIZATION: EASTERN MELVILLE ISLAND, N.W.T. DEFINITIONS AND ABBREVIATIONS LANDSCAPE TYPE GEOBOTANICAL FACIES HIERARCHICAL LEVELS SYMBOL \underline{AML} : Above Marine Limit: zone topographically above the influence of erosion or QUATERNARY ALLUVIUM 1. Silt Alluvium This list includes all the terrain units recognized on Melville Island (total 49) A three-level hierarchy was formulated for presentation of the Melville Island data. Although rank is deposition of the postglacial marine episode. Fine Sand Alluvium but is set up to anticipate additional units which undoubtedly occur elsewhere Medium to Coarse Sand Alluvium implicit in a hierarchy, in practice the ranks indicate degree of generalization of the data. The names (e.g., .061 Esker). The names assigned focus on recognition patterns. assigned to the levels are Landscape Type, Geobotanical Facies, and Terrain Unit, each being a BML: Below Marine Limit: zone topographically below which the influence of 2. Brown Gravels natural subdivision of the rank above. This system recognizes the varying significance of landscape erosion or deposition of the postglacial marine episode MAY BE detected. QUATERNARY MATERIALS Typical slope changes upon the detail of information required values (degrees) BARRENS: Large area where vegetation cover is less than 20%, characterized by EUREKA SOUND SANDS Eureka Sound Alluvium LANDFORMS AND LOCALIZED DEPOSITS (.0xx) Eureka Sound Sand BML There are 21 Landscape Types (LT) on eastern Melville Island. Each is designated by a letter code individual plants scattered across landscape (generally somewhat more Fluvial Units (.00x) Glacial Units (.06x) conforming to geologic convention. The landscape boundaries are shown on the map by thick solid Eureka Sound Silt BML Eureka Sound Sand AML . 062 Cirque: Glacial upland landform with amphitheatre 001 Alluvial terraces: poorly vegetated: Raised fluvial Eureka Sound Silt AML CHURN: Linear depressions caused by vehicle passage in which plastic deformation ng river, with gently sloping 18-35 (face) Landscape Types are subdivided into up to 6 <u>Geobotanical Facies</u> (GbF). Geobotanical Facies boundaries are represented by a thin solid line or, in a special case, by a dotted line denoting marine of material occurs with overturning of vegetation, if present; extrusion surface and steep slope facing the channel. of material on the outside of the depressions often occurs and a moulded Kanguk Alluvium KANGUK SHALE .063 Undulating topography: thick till, well drained:
Unit reserved for till with integrated drainag Kanguk Sandy Silt BML limit. Each Geobotanical Facies is represented by a single number immediately following the LT build-up of material between the tracks can occur. potential aggregate materials. Vegetation cover letters; number 1 denotes Alluvium, and the numbers then progress upwards from sea level Kanguk Thermokarst (Orange) BML less than 20%. Surfaces subject to deflation and EST: Estimate(d). Kanguk Paper Shale Upland AML Kanguk Sandy Shale AML Geobotanical Facies are divided into distinctive Terrain Units (TU). Forty-nine Terrain Units are .065 Undulating bouldery upland with ponds: morainic recognized from eastern Melville Island. These units recur; none is exclusive. Terrain Unit boundaries topography: Vegetation cover less than 20%. Coarse EXCESS ICE: Ice in excess of the quantity that would be retained as water in the Kanguk Thermokarst (Orange) AML .002 Alluvial terraces: partially vegetated: Raised fluvial 5 (top) debris mantle of single-lithology material are represented by a dashed line. They are assigned a three digit number following a decimal point, deposits paralleling river, with gently sloping 18-35 (face) HASSEL SANDSTONE separating it from the Geobotanical Facies number. The first digit of the Terrain Unit number indicates (lacking recognizable erratics) but with surface and steep slope facing channel. Coarser $\underline{\hbox{\it FURROW}}\hbox{\it :}$ Linear depressions (ruts) caused by vehicle passage in which material Hassel Sand BML the primary basis for pattern recognition: 0 indicates landform; 1 indicates veneer; 2 indicates characteristic glacial topography; occurs geobotanical pattern. Each Terrain Unit within a Landscape Type has a specific address: e.g. materials drain well. May contain potential has been compressed. Minor amounts of material may adhere to the Hassel Shale BMI several hundred feet above sea level. aggregate materials. Vegetation cover between track and be cast off beside the furrow. Some shearing may occur. Hassel Sand AMI 20% and 60%. Increasing probability of dissection Hassel Shale AML Bedrock-controlled Units (.08x) with height above river. Some surfaces subject GEOBOTANICAL FACIES: This unit is a natural subdivision of the Landscape Type to deflation and deposition. .080 Scarp face: Steep bedrock face commonly gullied or 15-30 unit and has composite distinctive character, including vegetation, Biorne Sandstone (LT), K22a UNIT 22A SANDS AND SILTS Sandy Upland while retaining visible affinity with the larger unit or that part of a ssected by many short, steep, parallel streams .003 Alluvial terraces: well vegetated: Raised fluvial Common surface to carry late-lying snowbed. bedrock unit masked by veneer of variable thickness which shows some deposits paralleling river, with gently sloping 18-35 (face) surface and steep slope facing the channel. ____(TU) Lower part generally masked by colluvium. characteristics of the underlying unit. CHRISTOPHER SHALE Christopher Alluvium Christopher Sandy Silt BML Occurs in association with . 081. Bjorne Sandstone Below Marine Limit Note: when a veneer unit fails to meet the above criteria it becomes a Christopher Silt BML (GbF) landscape unit on the basis of thickness and extent. potential aggregate materials. Vegetation cover .081 Scarp crest: Summit elevation of bedrock outcrop as 5 Christopher Sandy Silt AMI greater than 60%. For any one flight of terraces. linear ridge standing appreciably above adjacent Christopher Silt AML HEAVY RAIN: 3" rain or more within 24 hours. this is likely to be the highest and most terrain. Occurs in association with .080. Isachsen Sandstone BML ISACHSEN SANDSTONE IMPRINT: An impression of the tracks of the vehicle without noticeable compaction .082 Structurally controlled valley: Drainage along strike Isachsen Sandstone AML or displacement of the materials. .005 Braided channels: Broad water courses composed of or other weakness with many short, subparallel, ORGANIZATION OF EXPANDED LEGEND several intertwining channels separated by ephemeral tributaries. Valley commonly has MOULD BAY SANDSTONE Mould Bay Sandstone BML LANDSCAPE TYPE: A natural regional unit showing a distinct suite of landforms and channel bars and subject to seasonal snowmel 3. Mould Bay Sandstone AML gentle long profile. ssociated vegetation and based on both textural range and lithological Landscape Type Terrain Unit flood. Channels rapidly change pattern. character. The regional name is based on the bedrock formation name. Bottom sediment, which varies in composition .083 Wet lineated upland: Flat upland, usually fine Wilkie Point Alluvium WILKIE POINT SANDSTONE Information Boundary Unconsolidated materials greater than 2 m thick and having significant Geobotanical Facies commonly has low bearing strength down to Wilkie Point Sandstone BML grained sandstone; outcrop with high-angle. areal extent also are classified at this level: e.g. Quaternary Alluvium Wilkie Point Sandstone AMI frozen surface in summer. closely spaced bedding planes with surface water (derived from several sources) is classed in this manner standing in the microrelief troughs. BJORNE SANDSTONE .006 Dendritic drainage: Area dominated by well defined, Bjorne Alluvium MARINE LIMIT: Uppermost level for evidence of the postglacial sea; a boundary ::LANDSCAPE TYPE :: Bjorne Sandstone BML irregularly branched, tributary streams on .084 High water table: coastal lowland with wet meadow: 3 which no longer follows a contour line. It ranges from about 30 m to over 100 m elevation on eastern Melville Island. BJORNE SANDSTONE (Trb) 692 2 km 2 11% slopes less than 15°. Implies uniformity of Vegetated Bjorne Sandstone AMI :::% AREA: Coastal, with extremely low relief and water 4. Unvegetated Biorne Sandstone AML table extremely close to surface; characterized GEOBOTANICAL 2. Bjorne Sandstone BML (44%) by a grassy vegetation with greater than 75% .007 Gorge/ravine: Steep-sided, deep channel with moderate 25 + FACIES % AREA: 4% Trb MARSH: Vegetation partially submerged through part or most of the growing season, ASSISTANCE SANDSTONE 2. Assistance Sandstone BML cover. Substrate usually fine grained and does monocots usually dominate the upper strata; and moss the lower (often TERRAIN UNIT 1. 003 Alluvial Terrace, vell vegetated 41% 2. 040 Tundra ponds 3% 2. 107 Clay veneer 2% to steep long profile. Includes some glacial Well Vegetated Assistance not dry out in summer. Dessicated skin with completely submerged). Sandstone AML cracking may occur on bare surface but cracks 4. Partly Vegetated Calcareous MEADOW: Vegetation, mesic-wet in character; no visible surface water available .008 Lake (exceeding 500 m length): Water body of Sandstone AML through most of growing season. Upper strata usually monocot dominated. sufficient size to be mappable as single unit. Assistance Limestone Facies AML MORPHOLOGY AND Localized deposits (.09x) May have significant shrub component. Moss may be major plant cover Deeply Dissected Sandstone AML RELIEF Coastal Units (.02x) in lower strata. .090 Gravel - high level residuals: Coarse grained 2 (top) material of potential utility as aggregate. Vegetation cover less than 20%. Deposits on SABINE BAY SANDSTONE 2. Sabine Bay Sandstone BML 30 (sides) .020 Beach ridges: Sequence of linear, quasi-parallel, N/A: Not applicable. Sabine Bay Sandstone AML poorly vegetated deposits of beach material and topographic highs. PATINA: A thin, thalloid crust of cryptogamic vegetation found, often in great intervening better vegetated swales. Occasional BELCHER CHANNEL LIMESTONE 1. Belcher Channel Alluvium abundance, on surficial material of an unconsolidated nature and commonly ponds may occur in swales. Belcher Channel Limestone BML DRAINAGE .091 Raised marine/lacustrine residual deposits: associated with late-lying snow. It has yet to be positively identified. Belcher Channel Limestone AML Localized sorted accumulation greater than 2 m .021 Coastal zone, intermediate slope, well drained: Belcher Channel Calcareous thick. Material varies in composition and Uniformly sloping area adjacent to the coast, RECOGNITION PATTERN: Summary attributes of photographic images which recur as Sandstone AML commonly deltaic in origin. Fine grained units lacks identifiable raised beaches; slope angle small units. These patterns require field checking as some photographic images are easily confused. carry less than 20% vegetation cover 5-20°; drainage dominated by 1st order streams CANYON FIORD SANDSTONE Canyon Fiord Alluvium SURFACE Canyon Fiord Sandstone BML .092 <u>Till-bedrock complex</u>: Complex of undulating, .022 Cliffed coast: Steep linear bedrock slope facing water, 30-60 MATERIALS SSC: Sand, silt, clay ratio; (4) - number of samples. Canyon Fiord Sandstone AML discontinuous till and till veneer with ranging from precipitous to sheer. May have Slump Prone Facies intervening colluvial slopes and bedrock scree accumulation at base and/or narrow coastal SENSITIVITY: Summary elevation of the resistance of the natural environment to man's outcrops. Occasional ponds occur. lowland. Little or no vegetation. npact. The higher the sensitivity, the smaller the trigger necessary to PENNSYLVANIAN EVAPORITE 2. Gypsum Dome BML create visible change, usually considered to be deleterious Gypsum Dome AML Periglacial Units (.04x) VENEERED UNITS (.1xx) VEGETATION STEPPE: Vegetation, mesic-dry in character, dominated in upper strata by monocots. GRIPER BAY SANDSTONE Griper Bay Alluvium .101 Discontinuous marine veneer - poorly vegetated: .040 Tundra ponds: Groups of shallow, water-filled Shrub component is commonly rare or absent. Griper Bay Bouldery Sandstone BML Thin, patchy, usually fine grained material essions, including pools in low-centre Green Griper BML commonly with properties difficult to distinguish polygons. Usually well vegetated by wet STREAM ORDER: A measure of the position of a stream in the hierarchy of tributaries. Debris Mantled Upland AML from those of underlying material. Vegetation Streams" are only those appearing on the 1: 250 000 topographic map. Green Griper AML cover less than 20%. MAMMALS .041 Thermokarst: Low relief area disrupted by irregularly 5 TERRAIN DISTURBANCE: A man-induced, unintentional disruption of the natural HECLA BAY SANDSTONE Hecla Bay Alluvium .102 Discontinuous marine veneer - partially vegetated:
Thin, patchy, usually fine grained material, spaced, steep-sided closed depressions which lscape on a regional scale which will remain visible for several years. Hecla Bay Sandstone BML may contain shallow ponds. Depressions are Hecla Bay Debris Mantled Upland AML commonly with properties difficult to caused by melting of ground ice. TERRAIN PERFORMANCE: General rating of Terrain Unit with respect to man's 4. Hecla Bay Sandstone AML distinguish from those of underlying material probable impact under given conditions. .042 Major multiple slump zone: Area characterized by 2-15 Vegetation cover 20-60%. BIRDS WEATHERALL SANDSTONE 1. Weatherall Alluvium ous, active earth failures, usually found in fine grained materials, sufficiently large to unit and has distinctive character detectable on air photographs Weatherall Debris Mantled Upland AML be visible on 1:60 000 scale aerial photographs. Thin, patchy, usually fine grained material, Weatherall Sandstone AML commonly with properties difficult to TRAFFICABILITY: Summary evaluation of ease with which overland vehicles may .043 High-centre polygons: Extensive areas of polygonal forms, 10-30 m diameter, visible on 1:60 000 distinguish from those of underlying material traverse an area taking into account slope, dissection, surface material, BLUE FIORD LIMESTONE Blue Fiord Alluvium GROUND ICE AND Vegetation cover greater than 60%. Blue Fiord Limestone BMI ENGINEERING scale aerial photographs, resulting from ice segregation of unconsolidated coarse grained Debris Mantled Blue Fiord AML .104 Coastal lowland - discontinuous marine veneer-wet 5 Mappable unconsolidated deposit or organic accumulation primarily less meadow: Thin, patchy, usually fine grained material, commonly with properties difficult to material of varying size. Pattern defined by than 2 m thick, usually discontinuous, and overlying material having SILURIAN DOLOMITE 2. Silurian Dolomite BML troughs formed by melting ice wedges. 3. Silurian Dolomite AML distinguish from those of underlying material TRAFFICIBALITY .044 Sorted stripes, garlands, and polygons: Sorted boulders and cobbles with local sands. Pattern Vegetation cover greater than 75%, usually dominated by wet meadow. (rated 0-1-2) depends on regional slope with stripes on the 105 Colluvium: Thin, local, unconsolidated deposit steeper slopes, garlands on the intermediate accumulating on the lower parts of a slope. slopes, and polygons on lowest angle slopes STRATIFIED SYSTEM OF VEGETATION CLASSIFICATION SENSIVITY .045 Felsenmeer: Debris mantle of subangular blocks, .106 Till veneer: Accumulation of till up to 2 m thick, FRAVEL/TRENCH usually on flat or very gently sloping terrain. resting on material with different characteristics. (rated 1-5) Vegetation cover usually less than 20%. Local drainage is subsurface. Fines generally absent . 107 Clay veneer: Accumulation of fine grained Each environmental component is treated at the three levels of detail (heavy stippling for Landscape Type (dominantly clay) material up to 2 m thick; lighter stippling for Geobotanical Facies, no stippling for Terrain Units) which allows the user to select commonly local deposit below marine limit resting on material with different characteristics. . 108 Fluvial veneer: Linear deposit of fluvial origin; less than 2 m thick, along water course usually just downstream from a distinctive bedrock contact. $\underline{TRAFFICABILITY}$ 109 Rubble veneer: Lag deposit differing in properties GROUND ICE AND ENGINEERING PROPERTIES from the underlying material; less than 2 m thick. ackslash TRAFFICABILITY RATINGS for tracked vehicles without reference to size or type, Unified Soil Classification .110 Sand and gravel veneer: Localized deposit of sand Maximum Dry To give a meaningful indication of vegetation composition, a stratified system and gravel less than 2 m thick and of uncertain 0: Indicates travel in any direction is considered generally practical without Density at of classification was devised. The upper stratum consists of vascular plants: obvious difficulty from steep gradients, surface roughness, or bearing origin but differing in properties from material Optimum grasses, sedges, dwarf shrubs, and herbs. The lower stratum, commonly a strength. Minor difficulties may occur which can be easily avoided. Shrinkage or veneer, is cryptogamic - primarily mosses and lichens. This stratification Potential Compaction ZOOLOGICAL COMPONENT Group Frost Swelling Drainage lb. /cu. ft. and is presented as a fraction: the numerator indicates per cent cover and dominant .111 Silt veneer: Localized deposit with silty character, less than 2 m thick, resting on material with 1: Indicates that travel in any direction is possible but one or more attributes Properties Characteristics Void Ratio (e) Subgroups plant composition of the upper stratum; the denominator indicates per cent Divisions Symbol Action of the surface will probably delay progress by limiting speed or Symbol Group cover and composition of the lower stratum. When no lower stratum is present, differing properties. necessitating minor diversions. Boulder gravels the denominator is absent. Cobbles very slight Examples .112 Veneer, undifferentiated (e.g. till): Masking Muskoxen 2: Indicates that travel is very difficult or impossible. No attempt is made deposit with unknown properties; .112t probably Gravel and Well graded gravelto distinguish between the two conditions as it would depend on vehicle Caribou Almost none Excellent 10% Alopecurus 2% Saxifraga oppositifolia weight and prevailing conditions at the time of travel. Gradient is the till; .112a probably K22a. e<0.35 30% Moss - 30% Patina little or no fines prime deterrent in this rating, but bearing strength is also locally Loons, (not Anatidae but included), Ducks, Geese Waterfowl significant. Extreme surface roughness alone is not used as a basis for GEOBOTANICAL PATTERNS (.2xx) Well graded gravel-Medium Very slight Practically Bulls, Jaegers, Terns DISSECTION: PLAN AND SECTION sands with small Shorebirds Phalaropes, Peeps, Plovers, Others . 201 Poorly vegetated, lightly dissected bedrock:

Vegetation cover less than 20%; slope angles clay content Snow Bunting, Ravens (also includes Ptarmigan) Passerines MODERATELY Owls, Hawks, Falcons Uniform gravel with GU Almost none Excellent generally less than 5°. General symbol for birds little or no fines e<0.50 Unit not surveyed but considered not important to (A4) 202 Poorly vegetated, moderately dissected bedrock: >115 Poorly graded None to Almost none Excellent Vegetation cover less than 20%; slope angles e<0.45 very slight gravel-sand Considered a critical unit for birds. Does not generally between 10° and 20°. nixtures, little o necessarily refer to large numbers. no fines 203 Poorly vegetated, deeply dissected bedrock: unit used by birds for breeding purposes. Gravel-sand GF Slight to Almost none Fair to Vegetation cover less than 20%; slope angles SENSITIVITY RATINGS are a summary evaluation of the anticipated response of the mixtures with excess to slight practically e<0.40 generally greater than 20°. Dissection unit of potential use by birds terrain to two kinds of activity: overland travel and trenching. A numerical sufficient to impede travel. evaluation between 1 and 5 is assigned with 1 as the lowest sensitivity and 5 the staging area Almost none Excellent Well graded sands highest. Consideration is given to the thermal and moisture regimes in relation to and gravelly sands, e<0.40 204 Poorly vegetated, deeply dissected with hoodoos: >20°, commonly 30° <10° usually <5° vegetation cover and material composition. Only qualitative explanations are Steep to precipitous walls. Intermediate little or no fines attempted, and the range is applicable only to the mapped area under 'average' Ratings and low slope angles mantled with sand. summer conditions. These ratings do not apply to spring thaw when sensitivities Well graded sands Medium Very slight Practically >125Vegetation cover less than 20%. e<0.35 with small clay are generally higher. .205 Partially vegetated, lightly dissected bedrock:

Vegetation cover between 20% and 60%; slope Birds 1: Tracked vehicles either leave no visible effect or may leave a minor and Uniform sands, with SU 1. Highly used by birds Almost none Excellent 1. Known or estimated to be important probably discontinuous track imprint. Trenching, which often would be angles generally less than 5°. or critical, the latter dependent on which e < 0.70very slight in competent bedrock, would create no unusual stability problems related geographical area is considered Poorly graded sands SP None to Almost none Excellent . 206 Partially vegetated, moderately dissected bedrock:

Vegetation cover between 20% and 60%; slope to ice content. Vegetation is sparse to absent and no change would occur 10-20 e<0.70 with little or no fines very slight beyond possible superficial damage to individual plant specimens; root 2. Known or estimated to be of intermediate 2. Medium use by birds systems would generally remain intact. angles generally between 10° and 20° SF Slight to Almost none Fair to Sands with excess e<0.60 of fines to medium 2: Tracked vehicles leave no more than track imprints on the materials. 207 Partially vegetated, deeply dissected bedrock: 3. Known or estimated to be of low Vegetation may be marked but not destroyed. Trenching would create Vegetation cover between 20% and 60%; slope Fair to poor Silts (inorganic) ML Medium to Slight to Fine grained no unusual stability problems but the occurrence of bedrock would be angles generally greater than 20°. Dissection e<0.70 soils having rock flour, silty very high medium less or the degree of lithification less than in rating 1. sufficient to impede travel. 4. Estimated to be of very little or no low plasticity fine sands with importance slight plasticity 3: Tracked vehicles locally would furrow surface materials which may 208 Well vegetated, lightly dissected bedrock: channel snowmelt and cause rilling of the surface. Vegetation, which Vegetation cover greater than 60%; slope angles Clayey silts Practically Example may be variable in amount, may be subject to disturbance from which e < 0.70generally less than 5°. (inorganic) M1 (M2) Most of the units or the majority of a single unit are rated 1 for muskoxen, but it would recover in part. Generally changes in moisture would not lead bracketed unit indicates that some units or a portion of a single unit is rated 2. Organic silts of to major changes in vascular species composition. Only modest changes 209 Well vegetated, moderately dissected bedrock high high e<0.90 to the thermal regime would occur - an additional 5 to 10 cm of thaw Vegetation cover greater than 60%; slope angles generally between 10° and 20°. Basis for Wildlife Ratings equivalent to the depth of the furrow. MI Medium Medium to Fair to poor Silty clays soils having (inorganic) and Trenching may reveal ground ice but generally only interstitial or thin . 210 Well vegetated, deeply dissected bedrock: sandy clays segregated ice in moderate amounts, thus trench wall stability is only Vegetated cover greater than 60%; slope angles generally greater than 20°. Dissection sufficient The rating of Terrain Units as habitat for muskoxen and caribou was based on several locally affected by ice and size of materials. criteria: (1) densities of the two species in the units based on aerial surveys conducted Little or no original surface remaining Fair to Clays (inorganic) in March of 1972 and 1973 and in July-August of 1972-74 by F. L. Miller and R. H. Russell 4: Tracked vehicles would be liable to furrow and locally churn the surface of medium plasticity e<0.80 practically Each survey was designed to sample one-quarter of the study area; (2) caribou and materials to the frost table. Vegetation, which may have a high per cent muskoxen recorded outside the census strips on the above surveys; (3) numbers of both species seen in the units on a survey in July 1961 (Tener, 1963); (4) caribou and muskoxen impervious cover and be locally thick, would be substantially disturbed including Organic clays of OI possible local burying and severe stress on the root systems. Plastic recorded by several observers on nonsurvey flights; (5) ground reconnaissance of some deformation of materials may occur locally and extrusion of levees beside the tracks also may occur. Gullying will develop in some materials medium plasticity practically units in which the relative degree of past use was estimated from numbers of pellets, antlers Interpretation and compilation by D.M. Barnett, S.A. Edlund, and L.A. Dredge and horns, skeletons or carcasses, tracks, burrows, and other signs; and (6) knowledge following disturbance, and thermokarst may develop. Local changes or estimates of forage present in the units and its availability in winter (partly from the Highly compressible MH Medium to High Poor in drainage may cause changes in the composition of plant communities. micaceous or e<0.70 accompanying botanical and geological texts). Geology and Geomorphology by D. M. Barnett and L. A. Dredge Thaw flow slides may be triggered but less frequently than in rating 5. diatomaceous soils Trenching would reveal substantial segregated ground ice, locally in excess, which would lead to instability of the trench walls with potential Clays (inorganic) CH Very slight High Practically Vegetation by S. A. Edlund of high plasticity e<0.90 collapse on thawing.

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5: Tracked vehicles would be liable to churn the surface materials down to

the frost table. Vegetation, which may be substantial, would be severely disturbed, including possible burial or shearing of the upper plant from

coot systems. Extrusion of materials may occur to form a levee beside the twin channels created by the tracks. Gullying and thermokarst ponding may develop following disturbance. Changed drainage

conditions may alter the composition of the plant communities. Thaw

flow slides may be triggered either directly or following gullying or

ice leading to major instability of trench walls and collapse due to

thawing. Micromorphology would be destroyed - most notably in

mokaret development Trenching may reveal c

Terrain Units like .040 Tundra ponds.

impervious

Practically

impervious

Vr Visible ice in random or irregular

Nb Non visible bounded ice

e<0.70

Organic clays of

ICE Visible ice greater than one inch thick, may or

high plasticity

may not have soil inclusions

Vc Visible ice coatings on particles

OH Very slight High

Vx Visible ice as inclusions less than one inch thick Vs Visible ice stratified or distinctly

WE Water equivalent of ground ice present in sample

Wildlife by D.C. Thomas and L.S. Prevett

Drilling by M. F. Nixon, R. V. Young, and I. S. Hotzel

To accompany GSC Paper 76-23 by D.M. Barnett, S.A. Edlund, and L.A. Dredge

Bird observations were made from a 206B helicopter from a height of 30 m and at a

cruise speed of 160 km/hr. All species of birds and their numbers were recorded as well

as sex ratios and adult/young ratios wherever possible. Aerial surveys in both 1973 and

1974 were conducted along the coast where the majority of birds occurred. Based on some

reconnaissance flights, the lack of birds farther inland made it inefficient to make inland

Ratings of Terrain Units were obtained in the following manner: (1) the number of

birds per kilometre flown over, or adjacent to each unit, was assessed: (2) numbers of

birds per unit were compared to other units and analyzed; (3) scattered observations

were included: (5) units in which no birds were seen but were judged to be potential

habitat were classed accordingly; and (6) data from the botanical and geological

section of the text also helped determine how any particular unit was rated