



		LT	BJORNE SANDSTONE (Trb) 694.5 km <sup>2</sup>																																								
GEOBOTANICAL FACIES km <sup>2</sup> % area		GbF	1. BJORNE ALLUVIUM 28.7 km <sup>2</sup> (4% Trb)				2. BJORNE SANDSTONE BML 306.5 km <sup>2</sup> (44% Trb)						3. VEGETATED BJORNE SANDSTONE AML 79 km <sup>2</sup> (11% Trb)				4. UNVEGETATED BJORNE SANDSTONE AML 283.4 km <sup>2</sup> (41% Trb)																										
TERRAIN UNIT % AREA		TU	1.002 Alluvial terraces; partially vegetated 7.2 km <sup>2</sup> 25%	1.003 Alluvial terraces; well vegetated 11.7 km <sup>2</sup> 41%	1.005 Braided channel 7.0 km <sup>2</sup> 24%	1.040 Tundra ponds 2.8 km <sup>2</sup> 10%	2.008 Lake 0.5 km <sup>2</sup> (-)	2.020 Beach ridges 43 km <sup>2</sup> 14%	2.040 Tundra ponds 10 km <sup>2</sup> 3%	2.043 High-centre polygons 2.9 km <sup>2</sup> 10%	2.101 Discontinuous marine veneer, poorly vegetated 22 km <sup>2</sup> 7%	2.102 Discontinuous marine veneer, partially vegetated 29 km <sup>2</sup> 10%	2.103 Discontinuous marine veneer, well vegetated 159 km <sup>2</sup> 51%	2.107 Clay veneer 6 km <sup>2</sup> 2%	2.108 Fluvial veneer 8 km <sup>2</sup> 3%	3.007 Gorge/ravine 7.3 km <sup>2</sup> 10%	3.209 Well vegetated, moderately dissected bedrock 68.6 km <sup>2</sup> 90%	4.109 Rubble veneer 92.3 km <sup>2</sup> 33%	4.202 Poorly vegetated, moderately dissected bedrock 87.4 km <sup>2</sup> 31%	4.206 Partially vegetated, moderately dissected bedrock 103.7 km <sup>2</sup> 36%																							
SUMMARY EVALUATION	ENVIRONMENTAL VARIABLES	MORPHOLOGY	Ridge former with northerly dip; generally rounded topography; open terrain at higher levels; some incision in lower reaches. Vegetated facies more angular in morphology. Ranges from sea level to 210 m. Generally an east-west grain to the structures.																																								
		AND RELIEF	Terraces, river channels, and between-terrace depressions; relief 60 m.				Undulating terrain, gentle slopes, moderately dissected; relief 70 m.										Scarp and dip slope angular in section; 60-150 m a.s.l.					Rounded topography, open valley scarp slopes; 60-210 m a.s.l.																					
		DRAINAGE	GbF	elongate fluvial terrace adjacent to channels				elongate fluvial terraces; highest terraces most stable				anastomosing channels and bars		low relief surface; small ponds on oldest terraces		shallow oblong shape 3 m deep (est.)		linear, quasi-parallel ridges and troughs on intermediate slope		grouped shallow ponds on flat surface; few polygons present		group of polygons 10-30 m diameter with thaw troughs		moderate dissection, close spacing; steeper than 2.103; 20° slopes		moderately dissected; closely spaced; 15-20° slopes		lightly dissected, 8-15° slopes		uniform slopes moderately dissected		along river channels in narrow terraces		steep sided, V-shaped valleys		hilly, moderately to deeply dissected escarpment		convexo-concave hilly topography, hematite-rich rubble cap; moderately dissected; closely spaced		convexo-concave open rounded hilly terrain		moderately dissected low hills	
			TU	Unit relief 20 m Local relief 3 m		Unit relief 60 m		Unit relief 60 m Local relief 2 m		Local relief 2 m		3rd order stream drains lake		1st order channels; internal in swales - ponds.		internal drainage; saturated soil		internal drainage around polygons; centres drier; troughs have high soil moisture		well drained, channelled flow with short, steep tributaries; soil moisture low		channelled; short steep streams; well drained		rectilinear and conforming forming to structure; 4th order streams; moderate to well drained		channelled 1st order streams; soil moisture high on clay, moderate at depth		found along 3rd and 4th order segments; channels well defined		2nd order streams in deep channels; well drained		2nd order streams; generally low soil moisture		rectangular with short dendritic tributaries; soil moisture low		2nd order flow in open channels; well drained, very low moisture content		1st order channelled flow; dendritic, low to moderate soil moisture					
		SURFACE	LT	Rectangular pattern; well drained with sand and gravel stream bottoms. One 4th order stream plus several 3rd order streams. Stream will fluctuate very rapidly during snowmelt and following heavy summer rain.																																							
			GbF	Third order, broad, shallow channels.				Dendritic, in well defined channels, generally well drained; small units with poor internal drainage; tends to conform to structure.															Channelled; no standing water; well drained.				Several dry valleys; drains rapidly; rapid fluctuation of flow.																
		MATERIALS (includes SSC)	LT	Medium quartzose sand with some conglomerates. Predominantly reddish sands, locally grey. A very resistant, distinctive, dark red hematite lag gravel occurs locally. This is a common lining of stream beds.																																							
			GbF	Unlithified sand and gravelly sand; generally orange-red colour.				Unlithified graded sands with excess fines; materials locally gravelly; all materials have a characteristic red-orange colour.															Medium quartzose sand; grey				Well sorted, unlithified sand with gravels; clay-silt binder																
		VEGETATION (* dominant plant community)	TU	uniform medium grained sand, sometimes with gravelly veneer SSC 90-5-5	sand, with surface fines SSC 98-1-1 (at 50 cm)	sand with gravel locally SSC 95-2-3	sand between ponds fines at bottom of ponds SSC 90-5-5	lake water	red-orange sand or gravelly sand; some fines in swales; occasional boulders SSC 90-5-5 (est.)	sand; fines at base of ponds SSC 90-5-5 (est.)	gravelly sand-30% above 2 mm diameter SSC 95-2-3	sand with excess fines (20%) SSC 80-10-10 (est.)	sand with excess fines in topographic lows SSC 80-10-10 (est.)	unlithified orange sands with admixture of marine silts SSC 63-21-15 (4) surface 73-14-12 (4) 1 m	sandy with high silt-clay component (60%) at surface SSC 40-25-35 (est.)	river bed cobbles and pebbles; terraces of gravel with fine sand	sand, moderate lithification of gorge walls SSC 85-10-5 (est.)	mostly sand but with 22% fines at depth unlithified SSC 87-7-7 (3) surface 78-11-11 (3) subsurface	unlithified uniform, ochre-red sand underlying gravel veneer SSC 94-4-2 + 14% gravel	medium quartzose sand with a binder of fines; red gravel on surface; unlithified SSC 86-6-8 (4) surface 95-2-3 (2) 55 cm	medium sand with a silt-clay binder SSC 80-10-10																						
			LT	BML, vegetation cover is primarily based on <i>Luzula</i> associations; only in localized areas do gramineae, willow, and saxifrage become significant. Bjorne Sandstone AML is characterized by saxifrage-based communities; 2/3 of area is poorly vegetated saxifrage barrens; the other 1/3 has well vegetated saxifrage communities with various cryptogamic understories.																																							
ZOOLOGICAL COMPONENT	MAMMALS	GbF	Stabilized alluvium is well vegetated by <i>Luzula</i> /patina communities; areas with ponds have monocot associations. Stabilizing alluvium has scattered monocots and herbs which sometimes form substantial tussocks.				Mesic areas have a <i>Luzula</i> -based upper strata; lower strata components (moss and patina) vary with moisture availability.															Almost total (>70%) vegetation cover-saxifrage based communities. Variation in p-r cent cover related to moisture availability				Mostly saxifrage barrens (less than 5% cover); some areas nearly vegetation free; Localized areas of patina substrata occur in one unit.																	
		TU	10% rush-herb 50% patina occasional tussocks	20% <i>Luzula</i> 70% patina	Nil	pond edge: 25% sedge-grass 75% moss *interpond areas: 10% <i>Luzula</i> ( <i>Salix</i> ) 70% moss-patina	<5% <i>Puccinellia-Stellaria humifusa</i> barrens.	crest: 5% <i>Luzula</i> -lichen barrens *slope: 10% <i>Luzula</i> 70% patina swale: 15% grass-sedge 80% moss	pond edge: 20% monocots 70% moss slopes: 10% mixed monocots 60% moss *interpond: 20% <i>Luzula</i> 70% patina	*centres: <10% saxifrage barrens slopes: 10% <i>Luzula</i> -grass 40% patina troughs: 15% <i>Luzula</i> -grass 70% moss patina	<5% saxifrage- <i>Luzula</i> barrens	*topographic highs (60% area): <5% Saxifrage barrens lower slopes (40% area): 10% <i>Luzula</i> -saxifrage 50% patina	12% <i>Luzula</i> 70% moss-patina (1:1)	*slopes: (90% area) 15% <i>Salix arctica</i> 70% patina impeded drainage: (10%) 20% <i>Salix</i> -monocot 70% moss	terraces: 10% <i>Luzula</i> 60% patina river bed: nil	*slopes: <2% saxifrage-lichen barrens valley bottom: 10% saxifrage 70% moss-patina lower slope: 10% saxifrage 85% moss-patina	crest: <8% saxifrage-lichen barrens *midslope: 10% saxifrage 70% patina lower slope: 10% saxifrage 85% moss-patina	<5% saxifrage barrens	<1% saxifrage barrens	*highs and upper slopes: <5% saxifrage barrens colluvial slopes: 7% saxifrage 50% patina																							
BIRDS	LT	Survey densities per 100 km <sup>2</sup> : Muskoxen: all five surveys 6.6, winter (two) 7.3, summer 6.2. Caribou: all surveys 2.9, winter 7.3, summer 0. Muskoxen occur almost exclusively in lowland regions within 13 km (8 mi.) of the coast. Those coastal strips constitute important ranges. The unit is important to caribou in winter, especially if snow conditions are severe. Poorly vegetated hilltops in the western half of the unit are important or critical to caribou in some winters, e.g. 1972 and 1974.																																									
	GbF	Densities: Muskoxen, all surveys 25.5, winter 0, summer 42.4. Caribou, all surveys 0. Summer use by muskoxen is indicated.				Densities: Muskoxen, all surveys 10.5, winter 16.3, summer 6.7. Caribou, all surveys 2.0, winter 5.0, summer 0. Portions of Trb 2 are important to muskoxen and caribou.															Survey densities zero for muskoxen and caribou, but 3.209 is of some importance to the latter.				Densities: Muskoxen, all surveys 0.9, winter 0, summer 1.5. Caribou, all surveys 5.5, winter 13.8, summer 0.																		
GROUND ICE AND ENGINEERING PROPERTIES	LT	Little excess ground ice; high bearing strength generally. A generally favourable environment from the view of engineering properties.																																									
	GbF	stratified ice WE 50%				stratified ice WE 28%				stratified and massive ice along margins		segregated ice in polygons and excess ice		excess ice may occur beneath lake margin		segregated ice present; moderate excess ice		segregated excess ice in polygons		ice wedges in troughs; excess ice, locally high		ice variable but generally low; good subgrade		moderate excess ice		19% water in active layer; 64% in frozen layer		moderate amount excess ice; moderate plasticity		no data on ice; good subgrade		low ice content WE about 35%		low ice content WE 35%		nonvisible to stratified ice WE 37%		nonvisible ground ice WE 22%		nonvisible to stratified ice; little excess ice.			
TRAFFICABILITY (rated 0-1-2)	LT	0; locally 2 north to south across escarpments																																									
	GbF	Good except where steep slopes occur; 0, locally 1.				1															0; locally 2 north-south.				1																		
SENSITIVITY TO TRAVEL/TO TRENCHING (rated 1-5)	LT	1/1 Rated least sensitive of the larger Landscape Types.																																									
	GbF	1/1				1/2				3/5		1/5		2 wet/1		3 wet/5		2/4 wet/4		1/1		1/1		2/1		3 wet/1		3 wet/1		1/1		1/1		1/1									

Figure 4. Bjorne Sandstone Landscape Type: an example of the expanded legend

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Figure 4.