

ECODISTRICTS OF THE NORTHERN YUKON

The Northern Yukon includes portions of four ECOREGIONS – the Northern Coastal Plain, the Northern Mountains, the Old Crow Basin, and the North Ogilvie Mountains. Viewed and characterized from a more detailed perspective, each

ecoregion can be divided into subsystems termed ECODISTRICTS; these are intermediate order ecosystems within the ecological land classification hierarchy. A distinctive assemblage of biological and physical characteristics is associated

with each ecodistrict. Any one characteristic or several in concert may have implications for a broad range of land management considerations at the regional level.



1.01 KOMAKUK PLAINS: A nearly level coastal plain comprised almost entirely of several long, braided fans. Near-surface permafrost and gently inclined surfaces result in slow runoff and wet, poorly weathered soils. Vegetation consists predominantly of a continuous cover of sedges with trailing willows and mosses, a reflection of the cold climate and shallow active layer for root growth.



1.02 HERSCHEL ISLAND: An isle formed of elevated marine sediments. The surrounding sea waters and ice are largely responsible for the rapid erosion of the shoreline and the formation, in several areas, of marked sea cliffs. Vegetation is mostly cottongrass, trailing heath species, and various herbs. Herschel Island has had considerable historical significance as Inuit encampments, a whaling post, and an R.C.M.P. outpost.



1.03 KING PLAINS: A rolling morainal plain containing numerous shallow lakes and ponds. Owing to the shallow active layer, near-surface seepage is common. Mottled soils and wetland streams (often beaded) suggest a pervading wetness. The coastline possesses high bluffs and gulched cliffs. Vegetation is largely composed of cottongrass tussocks along with trailing heath, mosses, and lichens. This area provides considerable prime waterfowl habitat.



1.04 SHOALWATER BAY: An extension of the larger Mackenzie Delta. It is a low-lying area composed of organic materials, river-borne detritus, and river channels. Soils tend to be poorly developed. Water tables remain close to the ground surface, as the sedge and willow vegetation suggests. This is a prime waterfowl habitat.



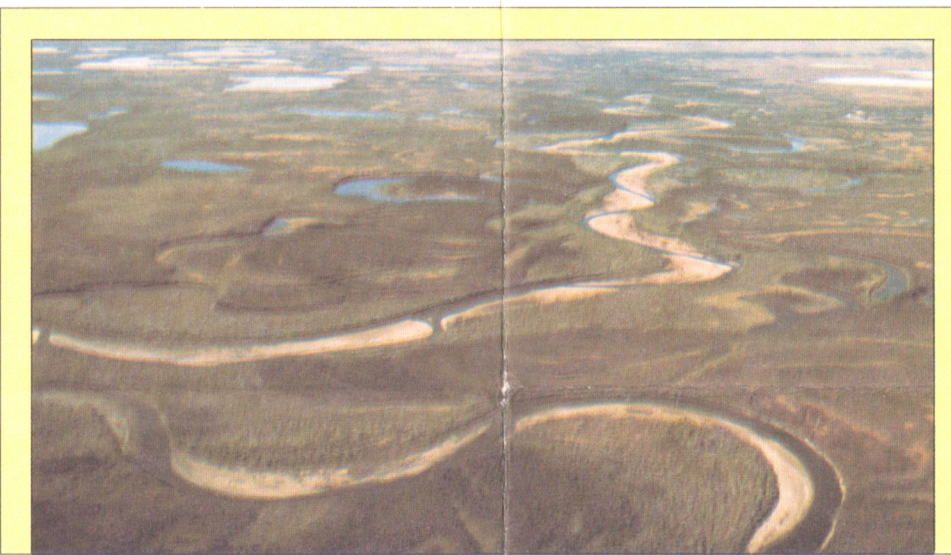
1.05 BABBAGE PLAINS: A hilly morainal plain at the base of the Northern Mountains. Soils are poorly weathered and are commonly wet for long periods. Permafrost remains close to the surface. Streams of local origin are mainly seepage types, whereas most well-defined river channels are incised. Vegetation is predominantly cottongrass tussocks interspersed with trailing to low shrubs.



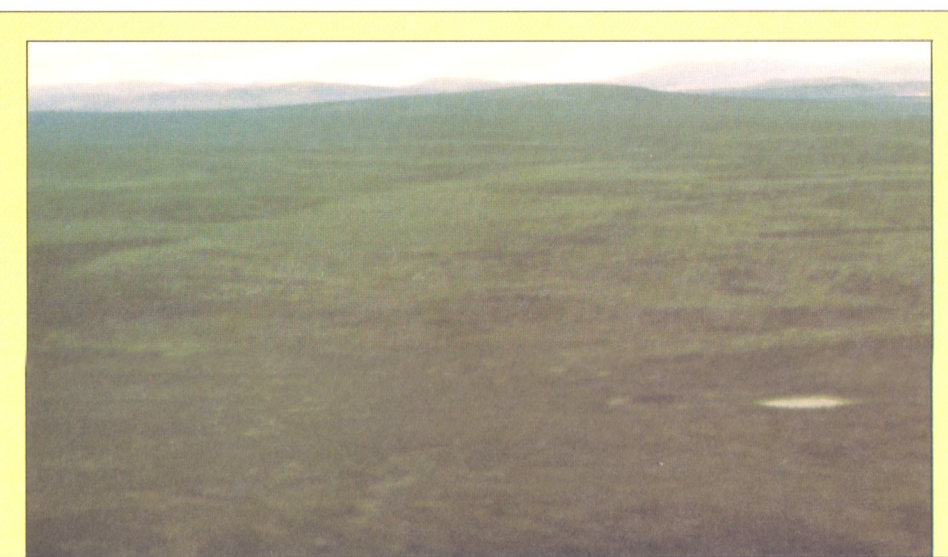
1.06 RUNNING RIVER: A rolling morainal plain with some protrusions of shattered bedrock. There are a few shallow lakes, streams are broad, incised, and generally anastomosing or braided. Vegetation is largely a continuous cover of cottongrass tussocks along with trailing to low shrubs and mosses.



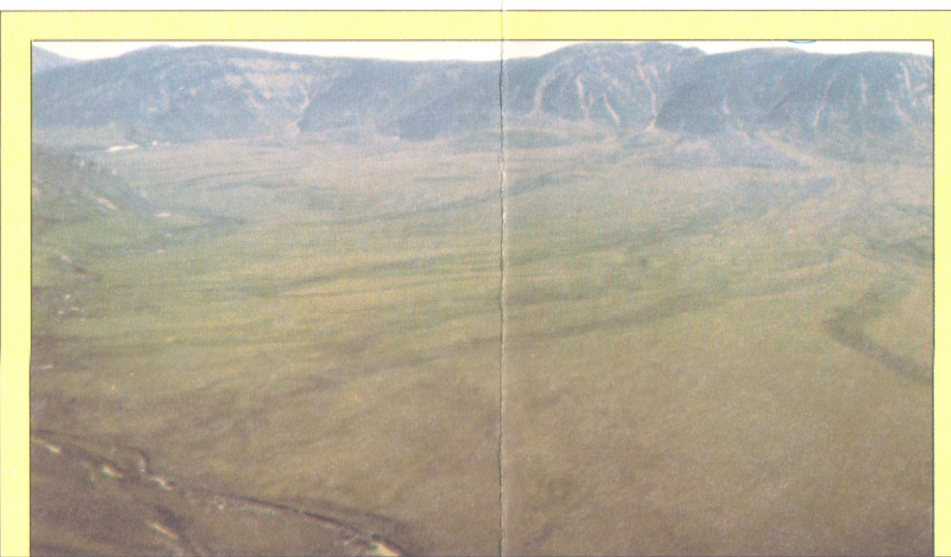
3.01 THOMAS CREEK: Low-lying and expansive basin consisting largely of multiple, overlapping pediments. Open stands of white spruce and tundra communities constitute the major and nearly continuous vegetative covers. Beaded streams and overland seepage are common features.



3.02 OLD CROW FLATS: A broad, flat plain of lacustrine sediments overlain by organics. Lakes are abundant. Rivers are meandering and incised. The vegetation consists of a mosaic of wetland, riparian, and aquatic communities along with communities of cottongrass tussocks intermixed with low shrubs on upland positions. This area probably constitutes the best waterfowl habitat in the Yukon Territory.



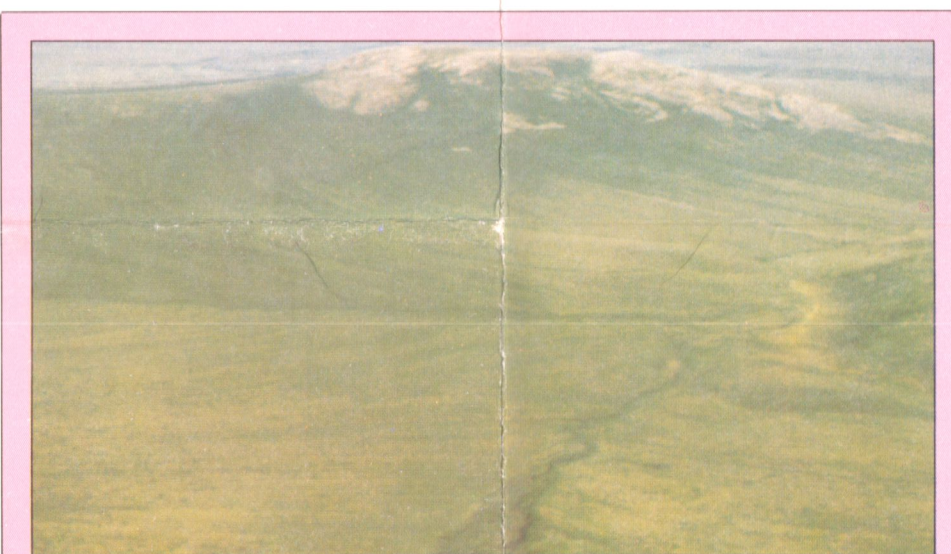
3.03 OLD CROW PEDIMENTS: A gently inclined surface comprised of extensive pediments. Sedge tussocks along with low-to-medium shrubs provide a fairly continuous ground cover. Slightly weathered to mottled soils underlie most of this area. The feather-textured drainage pattern suggests that permafrost-perched seepage is common.



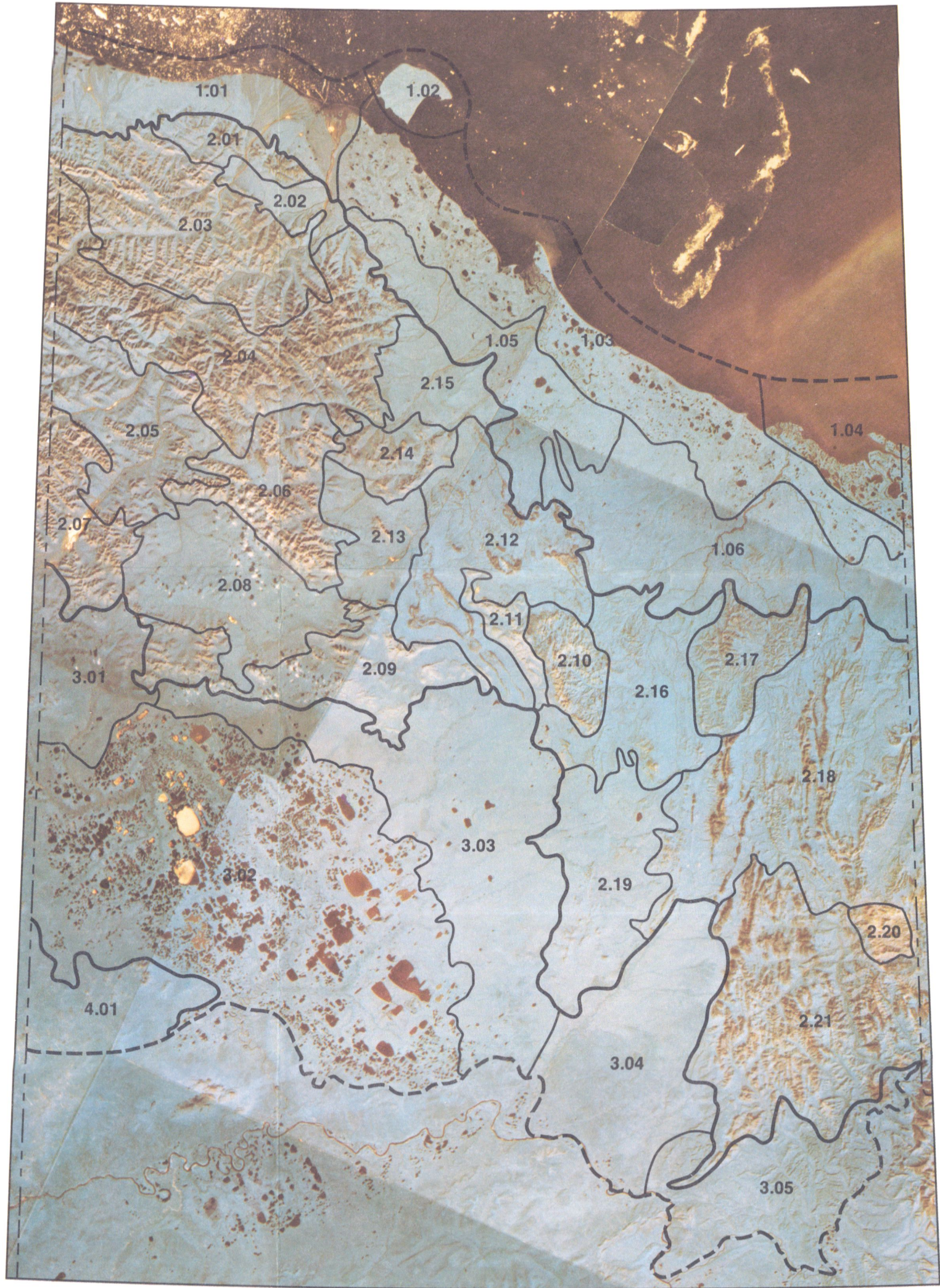
3.04 DRIFTWOOD RIVER: Extensive and gently inclined pediments which are interspersed with scattered outcrops and fluvial materials. The main vegetative cover is tundra comprised of cottongrass tussocks and low-to-medium shrubs. Ground cover is fairly continuous over these poorly developed soils.



3.05 WATERS RIVER: Rounded to slightly angular hills covered with colluvium. Vegetative cover and soil development are mixed and markedly influenced by slopes. Open spruce/lichen stands favor southern slopes, whereas open spruce/moss stands are more typical on northern aspects. Major rivers are braided and show highly seasonal flow.

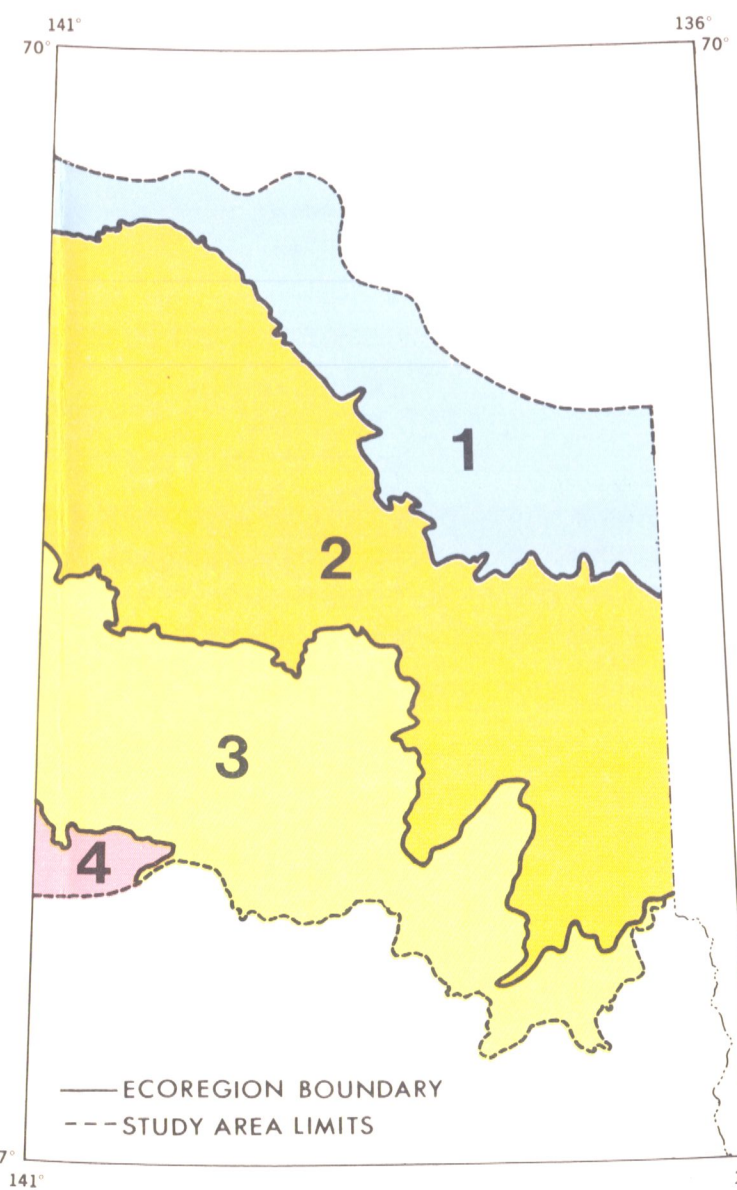


4.01 OLD CROW RANGE: A range of subducted granitic hills mantled by colluvial debris. Tors and blockfields are common on summits. Meandering streams are typical. Slopes are largely covered with tundra comprised of cottongrass tussocks and low-to-medium shrubs. Open white spruce stands occur in some lowlands and along many southern exposures; soil weathering is also better developed here.



COLOR II LANDSAT MOSAIC

10 0 10 20 30 40 50 Km



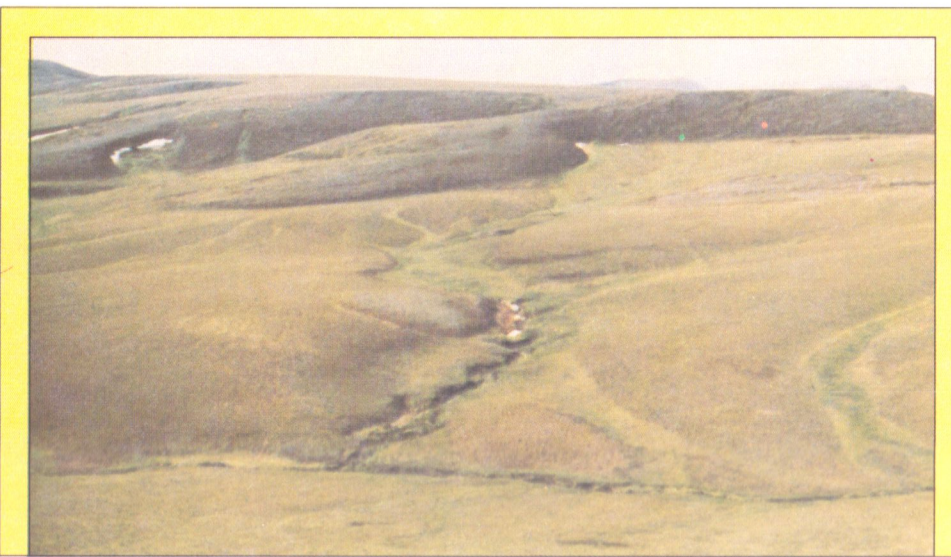
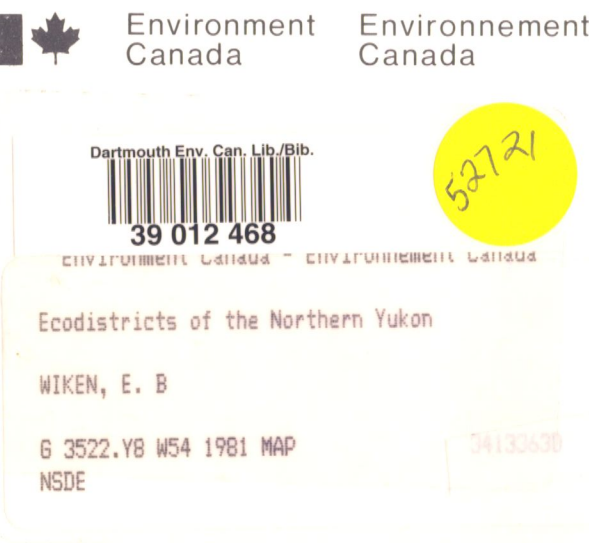
ECOREGION BOUNDARY

STUDY AREA LIMITS

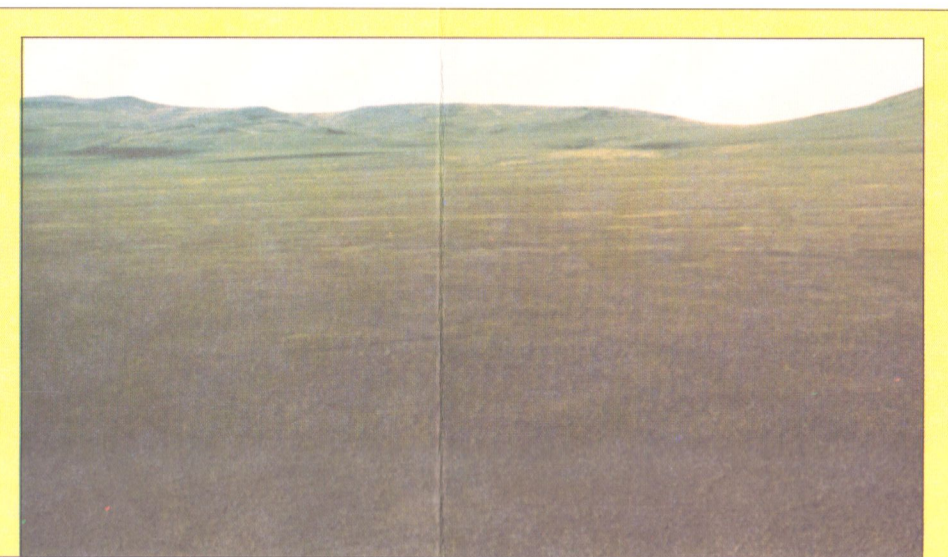
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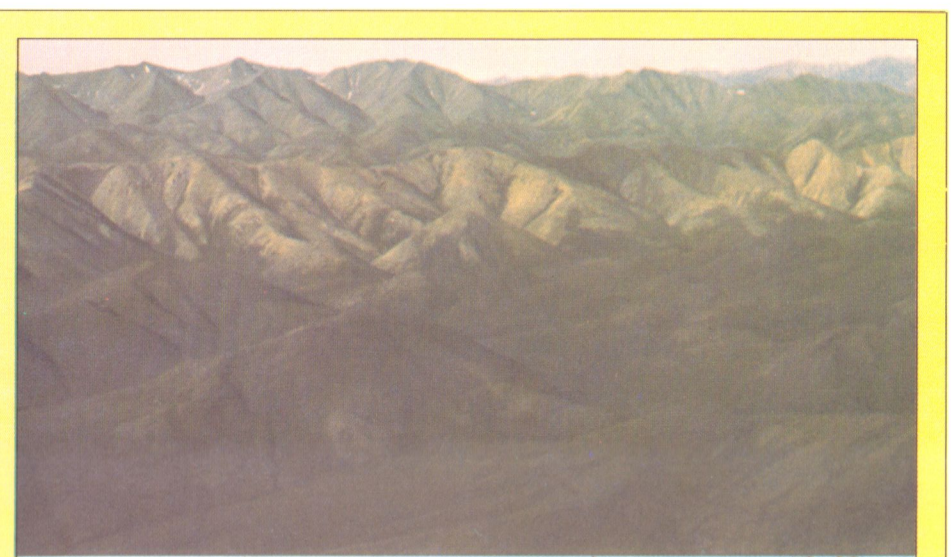
Boundaries and descriptions produced by E.B. Wiken, D.M. Welch, G.R. Ironside, and D.G. Taylor, Lands Directorate, Environmental Conservation Service, Ottawa, January 1981.
Map prepared by the Environmental Conservation Service Drafting Division.



2.01 MOUNT CONYBEARE: A range of low, rounded hills. Frost-induced talus and solifluction slopes are common. Streams have gravelly and sandy floodplains. Hillcrests are barren or support discontinuous covers of alpine communities, the lower slopes, however, owing to their greater stability and better rooting zone, have a fairly continuous cover comprised of cottongrass tussocks interspersed with trailing shrubs.



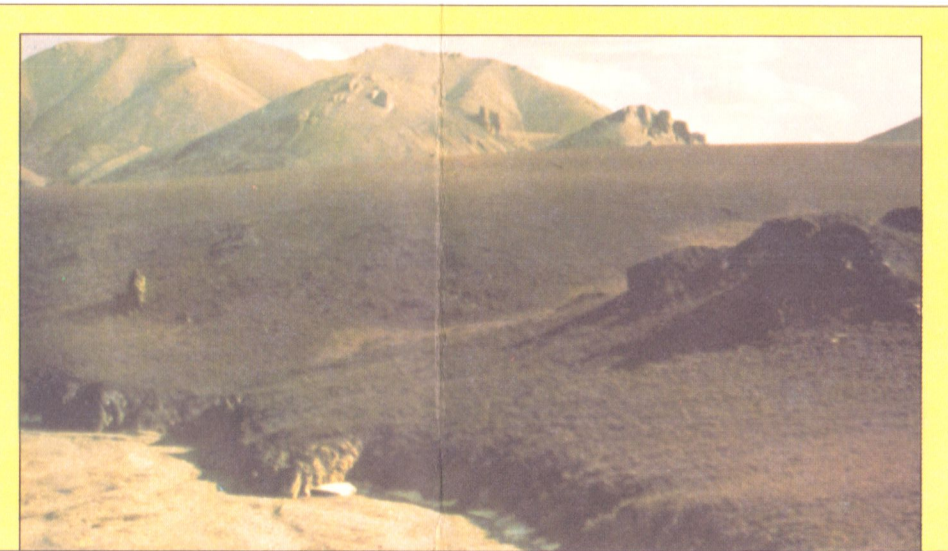
2.02 BUCKLAND BASIN: A broad valley comprised of gentle slopes and fine-textured pediments. The area is covered almost entirely with a continuous cover of cottongrass tussocks and trailing shrubs. At the eastern end of the basin is Engagaitak, an important archaeological and paleontological site.



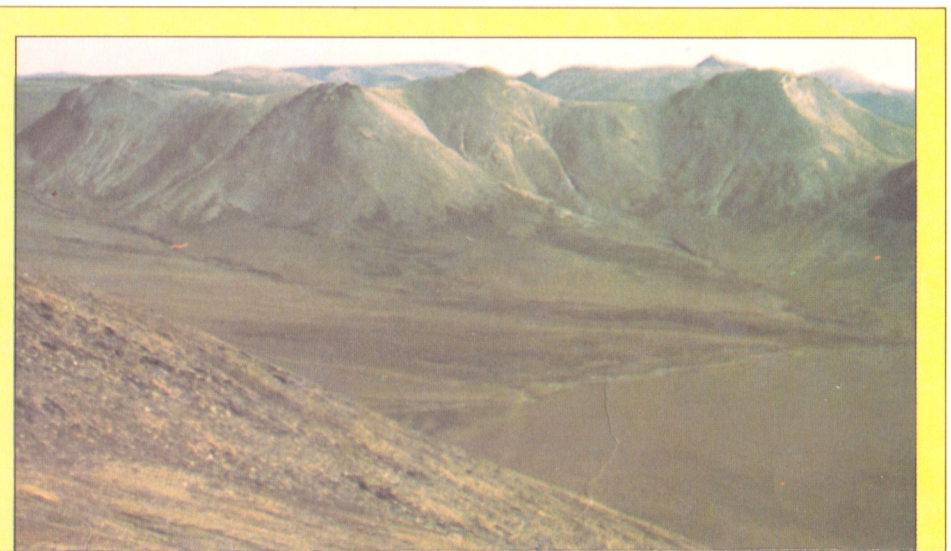
2.03 MALCOLM RIVER: A largely alpine environment typified by a series of rounded mountains. Colluvium is the dominant material covering the slopes; vegetative cover is poor on this unstable, coarse-textured material. The bisecting Firth River has some of the most northerly extending stands of trees in Canada.



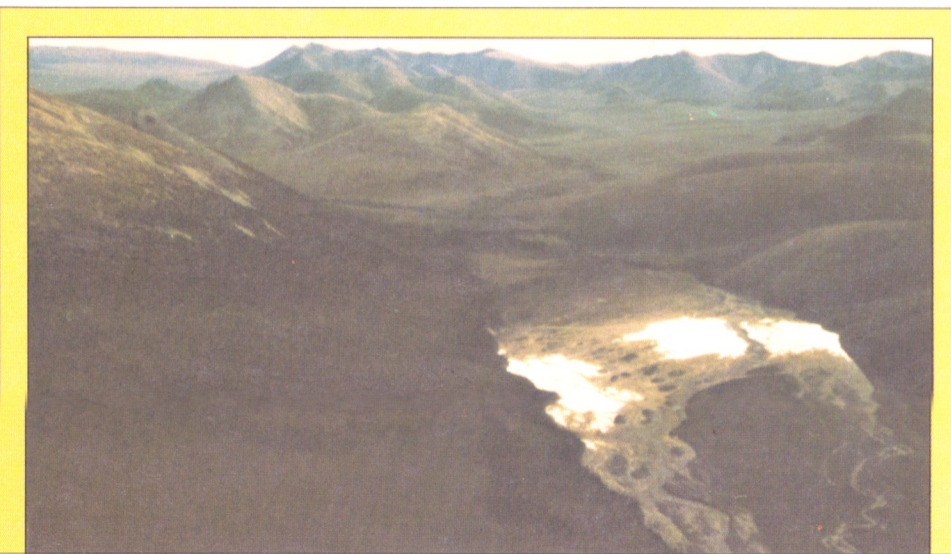
2.04 BRITISH MOUNTAINS: Rugged and poorly vegetated mountains typified by colluvial slopes, dyke-like ridges, and tors. Gravel-bed streams, which are usually dry during the summer, and patches of low shrubs and sedges occupy the lower reaches of the typically V-shaped valleys. Downslope movement of soil over permafrost is an active process.



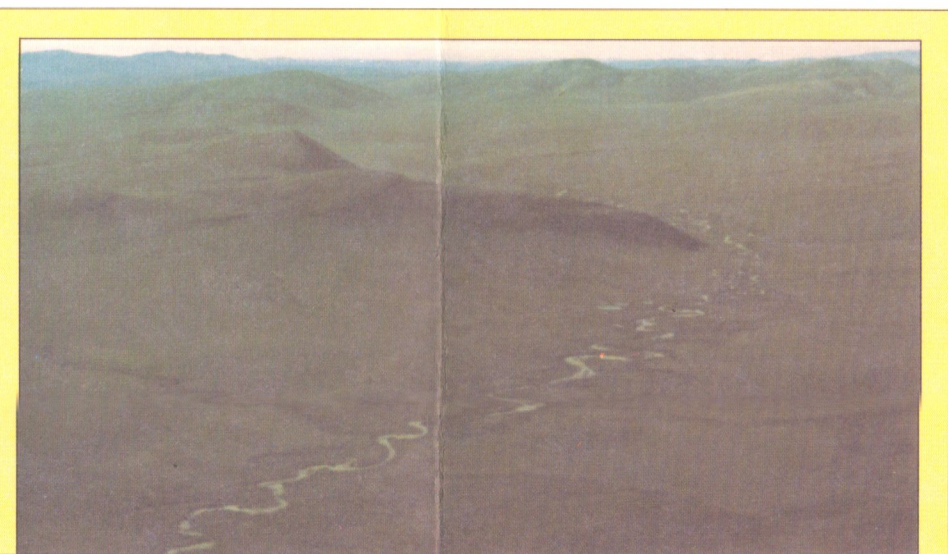
2.05 JOE CREEK: Low hills and broad, well-vegetated valleys. Colluvial materials, often demonstrating solifluction, dominate the valley slopes. Upper summits are mostly bare of vegetative cover. On slopes with a southern aspect, fairly dense stands of white spruce replace the alpine tundra. An icing on Joe Creek is a very prominent feature of the area.



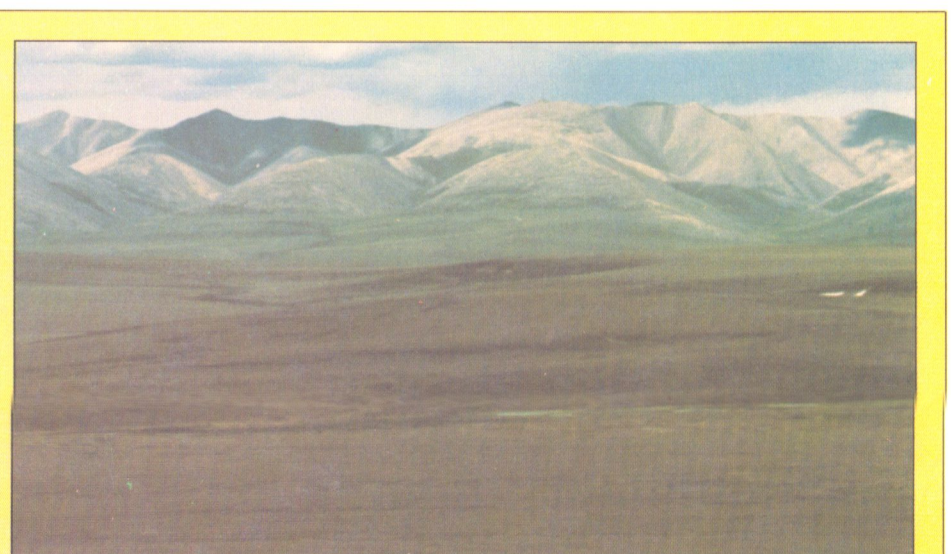
2.06 UPPER TRAIL RIVER: Closely spaced angular mountains mixed with large pediment valleys. A largely continuous cover of cottongrass tussocks and low shrubs predominates in the valleys; otherwise, alpine communities provide a poor cover on the frost-shattered colluvial slopes. Streams are of the gravel-bed type, indicating irregular and sudden flows.



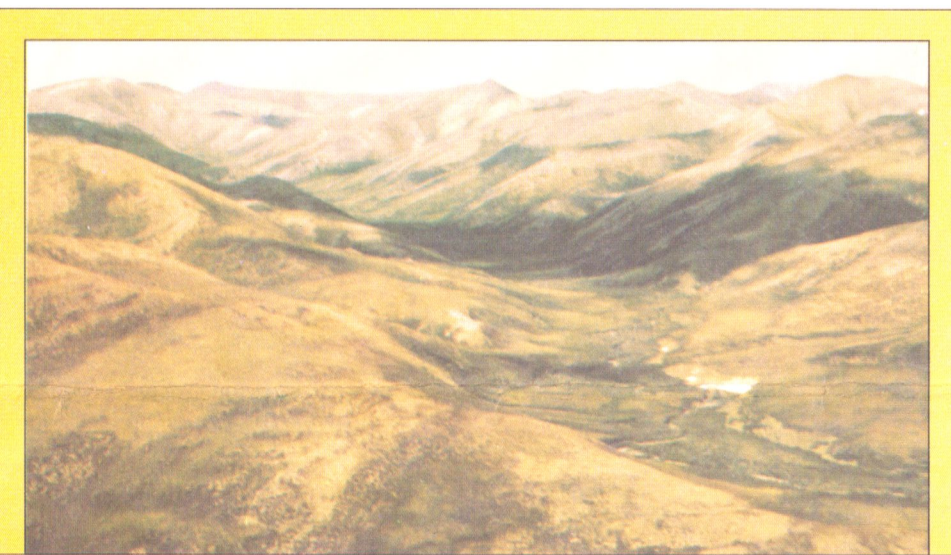
2.07 RIGGS MOUNTAIN: Closely spaced angular mountains. Vegetative cover is mainly limited to the lower portions of the colluvium-dominated slopes and consists largely of a relatively continuous cover of alpine communities, open spruce stands are common on southern exposures. One of the dominant features of the area is the wide, braided channel of the Firth River; a very large icing occupies a major portion of this channel.



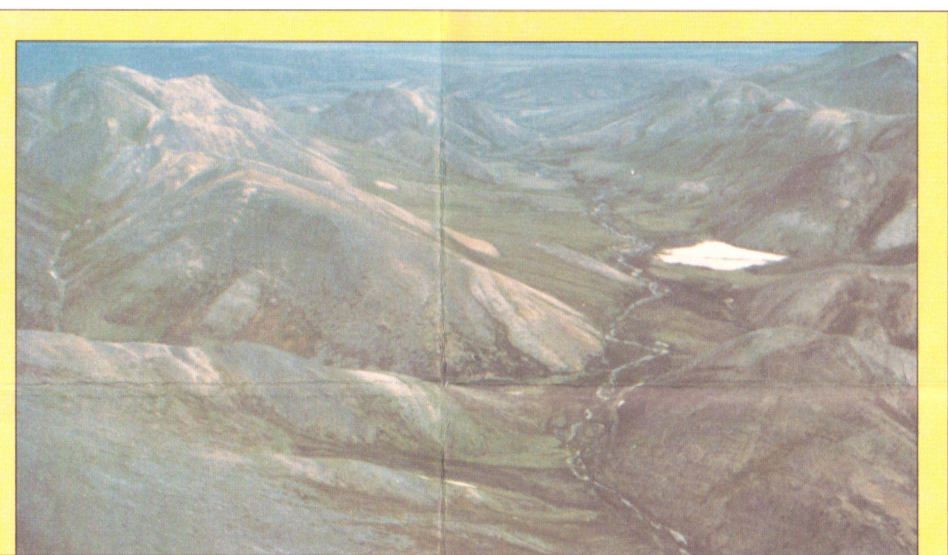
2.08 TIMBER CREEK: A large intermontane basin with gently rounded upland surfaces, extensive pediments, and numerous sedimentary outcrops. Ephemeral gravel-bed streams predominate in this area. The basin has a relatively continuous vegetative cover, mainly consisting of cottongrass tussocks along with low shrubs; hillcrests have sparser covers.



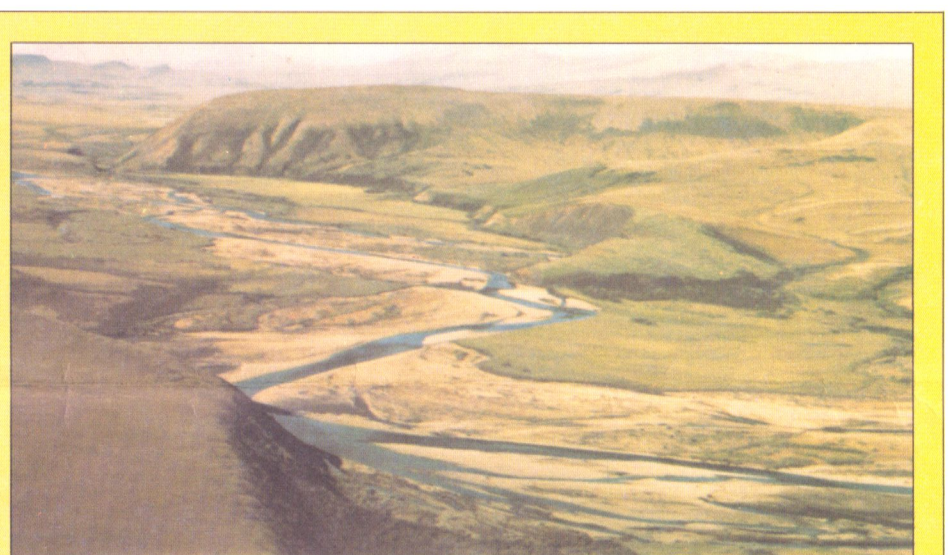
2.09 WHITEFOLD HILLS: Ridges of folded, calcareous outcrops and colluvium intermixed with valley pediments. Native streams are of the gravel-bed type. Alpine plant species predominate on the middle and upper slopes, whereas a lush, more continuous cover of cottongrass tussocks and low shrubs is associated with the pediments.



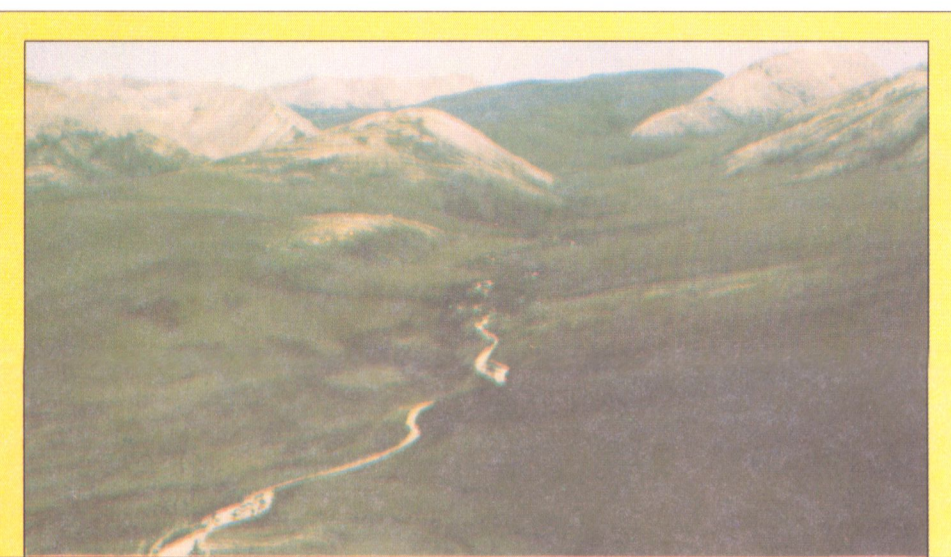
2.10 EAST BARN RANGE: A group of rounded, closely spaced mountains with narrow valleys. Ridgeline outcrops are common. Colluvium is the main material on the slopes. Summits have a sparse cover of alpine plant species, whereas valleys are characterized by a more lush cover of cottongrass tussocks and low shrubs.



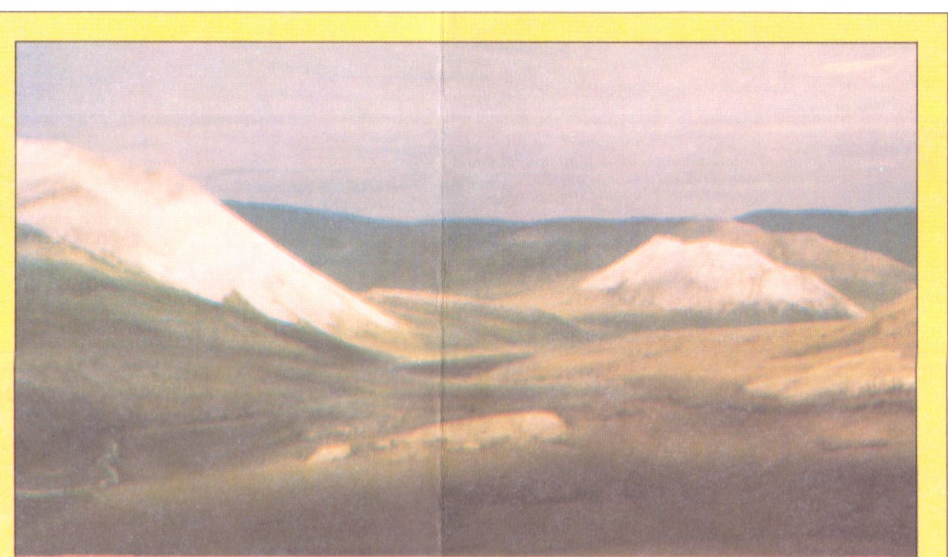
2.11 WEST BARN RANGE: Sinuous limestone ridges flanked by long colluvial slopes. Whereas the slopes have a sparse cover of alpine plant species, the gently sloping valley pediments support a relatively continuous cover of cottongrass tussocks and low shrubs.



2.12 BLACKFOLD HILLS: Dark, barren, sinuous ridges scattered across broad, undulating lowlands. The lowlands are comprised of extensive pediments which have a largely continuous cover of cottongrass tussocks and low shrubs. Lakes are absent.



2.13 COTTONWOOD CREEK: An undulating lowland covered by extensive pediments and residual surfaces. Gravel-bed and wetland streams are frequent. Pediments and fans support relatively continuous covers of cottongrass tussocks intermixed with low shrubs.



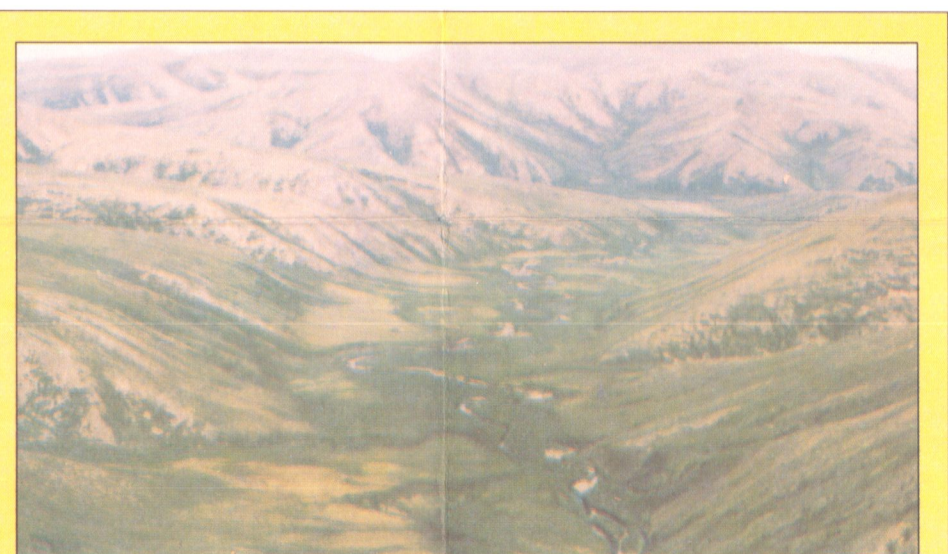
2.14 MOUNT SEDGWICK: A series of low, rounded mountains. Gravel-bed streams predominate but are not numerous. Middle and upper portions of slopes are typified by a very sparse cover of alpine plant species, whereas valley pediments are fairly well-vegetated with a mix of sedge tussocks and low shrubs. Soils display active downslope movement.



2.15 TULUGAQ PEDIMENTS: Smooth, gently sloping pediments of tundra-covered silt materials. Most streams are restricted to wetland seepage types. The vegetation is relatively continuous and comprised mostly of cottongrass tussocks intermixed with low shrubs.



2.16 BLOW PASS: A series of low, rounded hills. Native streams develop incised meanders. Vegetation consists primarily of a continuous cover of sedges and low shrubs. The former terraces of the Blow River are often quite broad.



2.17 PURKIS CREEK: Closely spaced, rounded mountains comprised of outcrops and colluvium of shales and sandstones. The area's large streams develop incised meanders. Vegetation is predominantly alpine tundra; upper and middle slopes are largely bare, whereas lower slopes have more extensive mats of alpine plants.



2.18 RICHARDSON FOLDS: Rounded, widely spaced, folded sedimentary formations. Frost-shattering has resulted in slopes mantled with colluvium. Most streams and rivers are incised. Sparse alpine communities predominate as discontinuous patches and stripes over much of this area; in valley depressions, however, communities of sedge tussocks and low shrubs are well-established.



2.19 BONNET LAKE: A series of low, gently sloping hills interspersed by low-lying pediments. Most of the area is drained by near-surface seepage. The main vegetative cover is a mixture of cottongrass tussocks and low shrubs. Excepting hillcrests, this cover is relatively continuous.

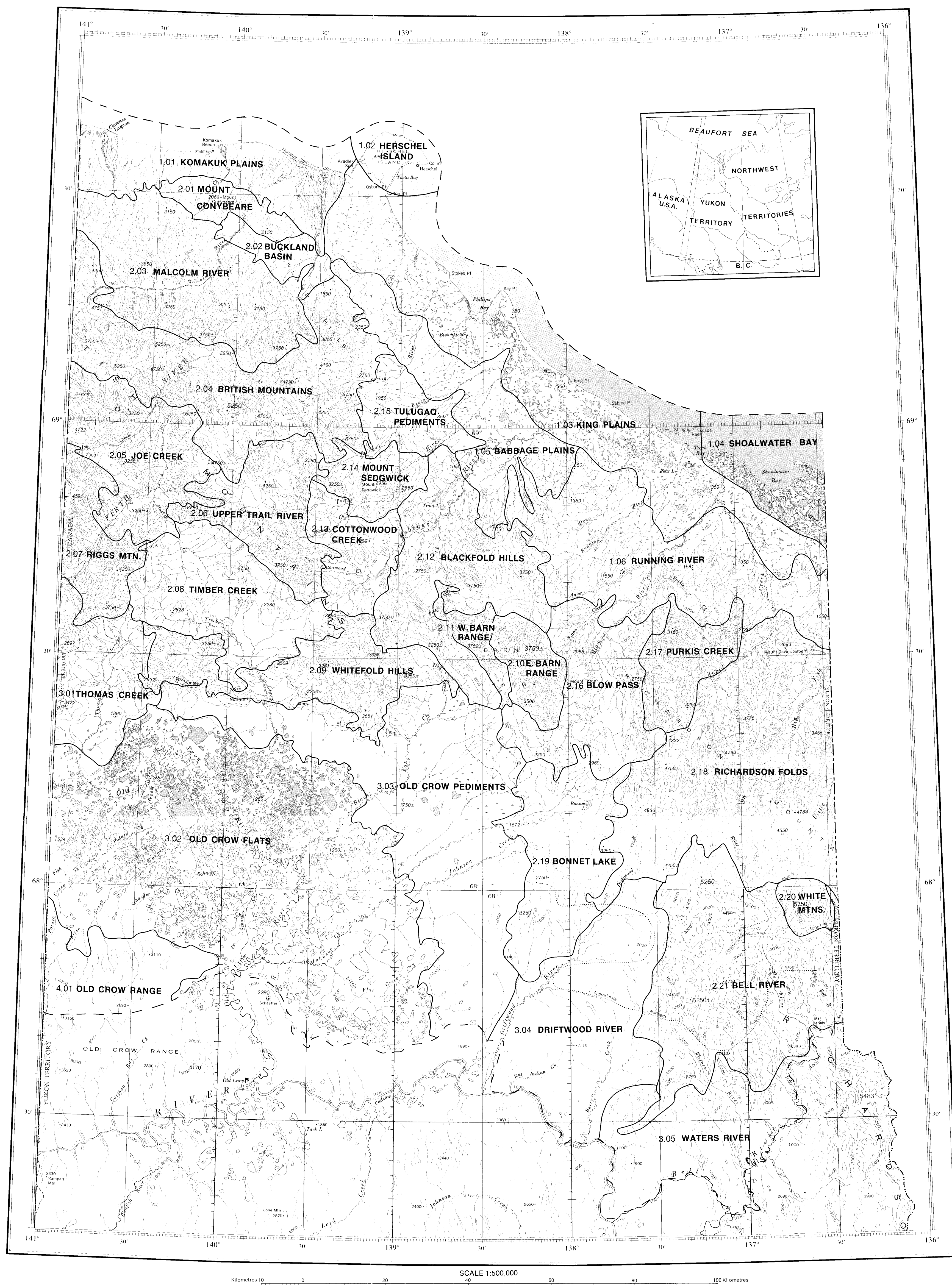


2.20 WHITE MOUNTAINS: Rugged and striking formations of limestone and dolomite. Valley walls are steep-sided and mantled with rubbly colluvial detritus; valley bottoms lack significant channel development and perennial streams are largely absent. Vegetated areas are very limited and tend to be restricted to a few small patches in the valleys, alpine plants predominate.



2.21 BELL RIVER: Angular colluvium-covered mountains eroded from largely sedimentary rocks. Streams generally have highly seasonal flow and braided channels. Upper slopes are largely barren, whereas lower slopes have relatively continuous and open stands of white spruce or tundra plant communities.

ECODISTRICTS OF THE NORTHERN YUKON



DOMINANT CHARACTERISTICS OF ECODISTRICTS

			CODE NUMBER	ECODISTRICT NAME	CHARACTERIZATION	LOCATION			AREA (km ²)	LANDFORM			LANDFORMS AND SOILS										VEGETATION			WATER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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