ISKUT RIVER WILDLIFE (UNGULATE) BIOPHYSICAL INVENTORY (104 B)

NATIONAL TOPOGRAPHIC SERIES — FIRST EDITION — Refer to this Map as: 104 B EDITION 1 ASE SERIES A 502 — CANADA, SHEET 104 B

BIOPHYSICAL CLASSIFICATION FOR WILDLIFE CAPABILITY

1. Explanatory Notes

This map represents a biophysical classification for wildlife (ungulate) capability. It is general in nature and is presented at a scale of 1:250 000. Like capability maps for forestry and agriculture, ungulate capability maps are based on landforms, surficial materials, soils, climate and vegetation that are considered to form "ecologically significant" units of land. For wildlife, biophysical base maps may be supplemented by animal censuses to gain an insight into ungulate distribution and abundance.

The biophysical mapping approach used here is a step wise process beginning with the two most fundamental needs of wildlife - food and cover. These attributes are assessed using terrain and soils as mapped by other services in the Terrestrial Studies Branch. Areas of land judged to have differences significant to ungulate management are designated as map units. Subsequent steps in the assigning of capability values are the assessment of a number of environmental conditions influencing the expression of ungulate capability.

The capability of the land to support a given ungulate species is based on the long term ability of that land to meet the total needs of the species. In terms of food and cover requirements, the ratings are based on the optimum vegetational (successional) stage that can be maintained. Management prescriptions are limited to: prescribed burning or grazing; prescribed logging or slashing; or, protection from any land use practice that is detrimental to the wildlife species.

Carrying capacity estimates are expressed as animals/square kilometer/year which can be supported on a sustained basis and are represented on the map by a capability class rating from 1 (highest) to 6 (lowest). Each unit is assessed for its ability to sustain the assigned ungulate species during winter or summer (non-winter) periods.

This capability classification reflects only the biological and physical parameters of the environment and does not take into account social and economic factors. Also, the classification does not reflect present land use (except where the inherent capability has been permanently altered), ownership, degree of access, current wildlife management practices, nor hunting pressure.

For the purposes of this map, wildlife are considered to be wild, cloven-hooved, herbivores or wild ungulates of the Cervidae and Bovidae families.

2. Example of Map Symbol

CAPABILTY RATING (see Boxes 4 & 5) — $X^{1b*}E^{3}M_4W_4$ / Lf Sm — SUPERSCRIPT RATING INDICATES WINTER RANGE

UNGULATE SPECIES (see Box 3) — SUBSCRIPT RATING INDICATES SUMMER RANGE

ENVIRONMENTAL CONDITIONS (see Box 6)

Note : An asterisk (*) following a capability rating indicates a rutting area.

This example would be interpreted as follows:

A floodplain unit of moderate winter snow accumulation which is a very high capability winter range for moose (also a rutting area), a moderate capability winter range for elk and a low capability summer range for mule deer and white-tailed deer.

3. Ungulate Species Symbols

B...Black-tailed Deer	E...Elk	M...Mule Deer	W...White-tailed Deer
C...Caribou	G...Mountain Goat	S...Mountain Sheep	X...Moose

4. Capability Classes

CLASS 1	Lands in this class have very high capability to support the assigned ungulate species. When required, this class may be subdivided on the basis of productivity into classes 1a, 1b and 1c.
CLASS 2	Lands in this class have high capability to support the assigned ungulate species.
CLASS 3	Lands in this class have moderate capability to support the assigned ungulate species.
CLASS 4	Lands in this class have low capability to support the assigned ungulate species.
CLASS 5	Lands in this class have very low capability to support the assigned ungulate species.
CLASS 6	Lands in this class have no or virtually no capability to support ungulates.

5. Biophysical Ungulate Capability Class Carrying Capacity Estimates

ANIMALS / SQUARE KILOMETRE / YEAR

Species Classes	Black-tailed Deer	Mule Deer and White-tailed Deer	Mountain Sheep	Elk	Caribou	Mountain Goat	Moose
1c	34-41	26-32	20-24	16-20	13-15	10-12	8-9
1b	27-34	21-26	16-20	13-16	10-13	8-10	6-8
1a	20-27	16-21	12-16	10-13	8-10	6- 8	5-6
2	14-20	11-16	8-12	7-10	5- 8	4- 6	3-5
3	7-14	5-11	4- 8	3- 7	3- 5	2- 4	2-3
4	3- 7	2- 5	2- 4	1- 3	1- 3	1- 2	1-2
5	<3	<2	<2	<1	<1	<1	<1
6	0	0	0	0	0	0	0.

6. Environmental Conditions

The most significant environmental conditions influencing the production of the species and thus determining the capability class, are indicated on the map by symbols. The environmental conditions affect the ability of the land to meet the needs of the species in terms of food, cover and other requirements. For convenience, the environmental condition symbols are placed in three main categories: those relating to climate (such as snowfall or temperature), those relating to the inherent characteristics of the land (such as landforms, soils or vegetation potential), and those relating to permanent anthropogenic (man made) changes to the land base.

CLIMATE

- Pa - RAIN SHADOW - unit in which more xeric tolerant plants become established due to climatic factors than occurs in adjacent areas
- Sh - HIGH SNOW - unit in which snow accumulation is greater than approximately one meter
- Sl - LOW SNOW - unit in which snow accumulation is less than approximately one half meter in depth
- Sm - MODERATE SNOW - unit in which snow accumulation is approximately one half to one meter in depth
- Sp - SNOWFIELDS AND GLACIERS - unit of permanent ice or snow
- Ss - INTENSIFIED SOLAR RADIATION - unit in which snow accumulation is significantly reduced through exposure to solar radiation on southerly aspects
- Sw - WINDSWEPT SNOW - unit in which snow accumulation is considerably reduced by wind erosion
- Ta - ALPINE ARIDITY - unit at high elevations that is subject to aridity in summer from extreme evapotranspiration and wind action
- Tc - COLD AIR LAYER - extreme and persistent freezing temperatures below temperature inversions
- Tf - FROST POCKETS - unit that is subject to increased occurance of freezing temperatures relative to the surrounding terrain
- Th - HIGH HEAT - unit that is subject to high heat causing extreme evapotranspiration
- Tw - WARM AIR LAYER - relatively warm air, occuring over temperature inversions
- We - EXPOSURE - unit that is greatly exposed to local winds throughout the year

ANTHROPOGENIC

- Hh - RESERVOIR DRAW-DOWN ZONE - the area between full pool and low pool in reservoirs
- Hi - INDUSTRIAL DEVELOPMENT - unit of industrial development such as mills, mines, tailings or spoil areas
- Hr - TRANSPORTATION CORRIDORS - unit that has a significant proportion of transportation development such as roads or railroads
- Hu - URBAN DEVELOPMENT - unit that has permanent urban development

SOILS AND LANDFORMS

- Ea - ALPINE TUNDRA SOILS - unit of virtually treeless high elevation mountains or plateaus
- Eb - ALKALINE SOILS - unit of strongly alkaline soil
- Ed - OPEN FOREST SOILS - unit where an open forest or a transition forest/grassland becomes established
- Ef - UPLAND FOREST SOILS - unit where dense conifer forests become established
- Eg - GRASSLAND SOILS - unit where a grassland becomes established
- Eh - MOIST SOIL - area of moist mineral soil
- Ek - KRUMHOLZ FOREST SOILS - unit that has an interrupted forest cover of stunted subalpine tree species
- El - DEEP LACUSTRINE DEPOSITS - unit that is dominated by soils developed from deep, inactive lacustrine deposits
- Em - SUBALPINE MEADOW - unit where a subalpine meadow becomes established
- Eo - ORGANIC SOILS - unit with poor drainage that is dominated by organic soils
- Er - BEDROCK - unit that is dominated by bedrock
- Es - SALINE SOILS - unit of strongly saline soil
- Et - TALUS - unit that is dominated by talus
- Ev - DEEP FLUVIAL DEPOSITS - unit that is dominated by well to rapidly drained soils developed from deep, inactive fluvial deposits
- Ex - DRY SOIL - unit that is dominated by well to rapidly drained soils of coarse textured morainal or colluvial materials
- La - AVALANCHE TRACTS - unit that has avalanche chutes
- Le - SOIL EROSION - unit that has erosion or potential erosion ranging from sheet erosion through to minor gulleying
- Lf - ACTIVE FLOODPLAIN - unit of flat land bordering a river and subject to periodic flooding
- Li - FRESH WATER INUNDATION - unit that is subject to long periods of natural flooding resulting in marshy vegetation
- Ll - LEVEL LAND - unit that is flat with slopes less than 2°
- Lr - ROLLING OR HILLY LAND - unit with complex slopes of between 5 and 30° in a generally low relief area
- Ls - STEEP SLOPES - unit with slopes greater than 25°
- Lt - TIDAL INUNDATION - unit that is flooded frequently by tidal activity
- Lv - FAILING SLOPES - unit of extensive slope movement

7. On-Site Symbols

(L) : Identifies the location of known mineral licks

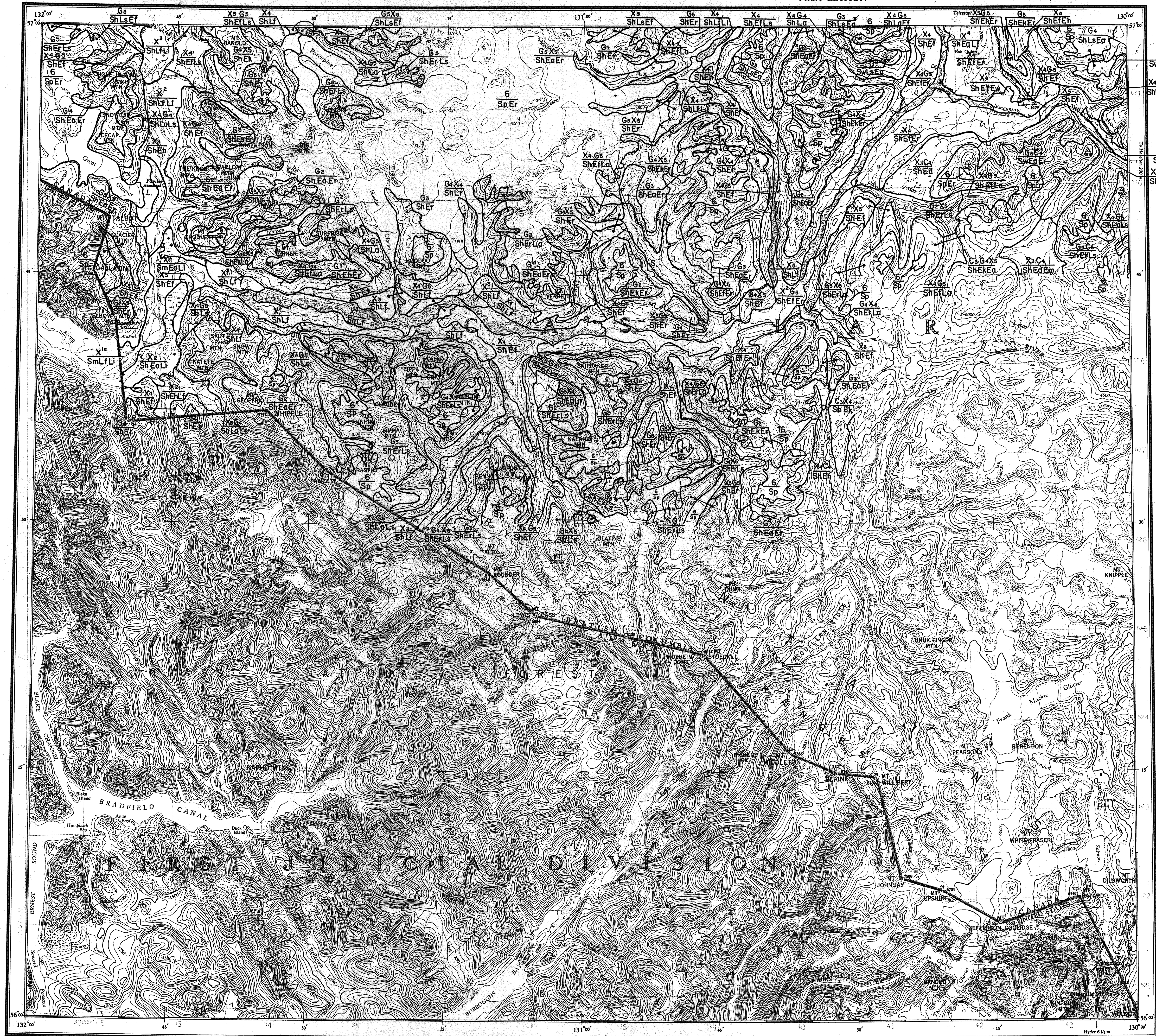
(dotted outline) : Identifies important known or suspected seasonal movement corridors

8. References

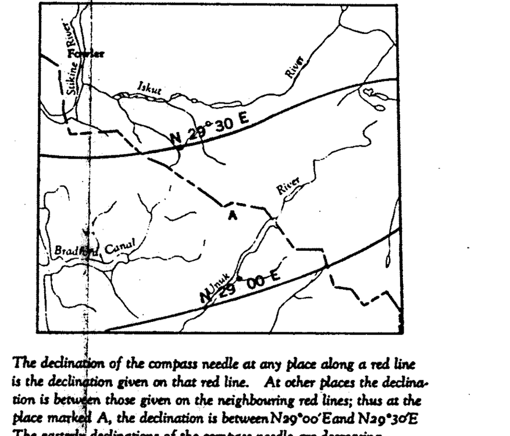
For a more detailed description of the classification system the reader should refer to the guidelines which outline the Biophysical capability classification for ungulates in British Columbia. These guidelines are available from the Terrestrial Studies Branch, Ministry of Environment, Parliament Buildings, Victoria, British Columbia.

9. Credits

Mapped by: D. Blower
Date Mapped: 1982 - 83
Date and scale of photography: 1974 — 80 chain
Date of base mapping by: Surficial Geology 1982/83, Soils 1982/83, Vegetation 1982/83
Date drafted: 1983
Revision dates:
Drafted by Cartography Unit, Terrestrial Studies Branch, Ministry of Environment, Victoria, B.C.
Base map provided by : Surveys and Mapping Branch, Ministry of Environment, Victoria, B.C.
1982 Edition



THE DECLINATION OF THE COMPASS NEEDLE, 1955



The declination of the compass needle at any place along a red line is the declination given on that red line. At other places the declination is between those given on the neighbouring red lines; thus at the place marked A, the declination is between N29°00′E and N29°30′E. The easterly declinations of the compass needle are decreasing 4 minutes annually.

Based on control by the Topographical Survey and International Boundary Commission, Department of Mines and Technical Surveys
Compiled, drawn and printed by the ARMY SURVEY ESTABLISHMENT R.C.E. Department of National Defence, 1952-55.
Aerial photography by the R.C.A.F. 1949.
Area in Alaska from the Bradfield Canal map of the United States Geological Survey.

ISKUT RIVER

CANADA–UNITED STATES

Scale 1 : 250,000
1 Inch to 4 Miles Approximately

Miles 5 0 5 10 15 20 Miles
Kilometres 5 0 5 10 15 20 25 30 Kilometres

Copies may be obtained from
The Map Distribution Office,
Dept. of Mines and Technical Surveys,
Ottawa.

Contour Interval 500 Feet in Canada. Contour Interval in U.S.A. 200 and 250 Feet.
Elevations in Feet above Mean Sea Level.

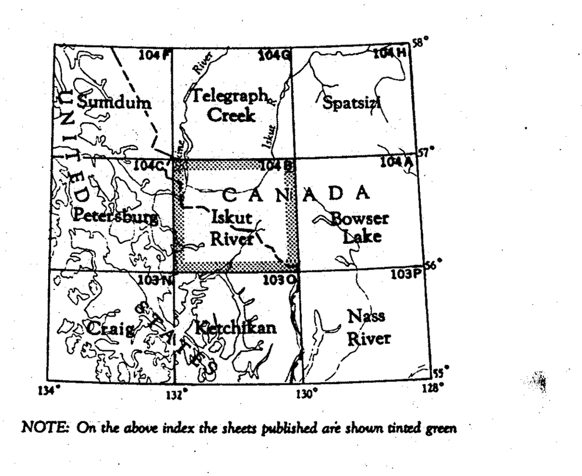
Universal Transverse Mercator Projection.
North American Datum 1927
Preliminary 1952

REFERENCE

- Road, Hard Surface, All Weather — More than 2 Lanes, Route No. 26, 2 Lanes
- Loose Surface, All Weather — 2 Lanes, Wide or More
- Less than 2 Lanes — All Weather, Dry Weather
- Cart Track, Trail — Cart Track, Trail
- Railway, Multiple Track
- Single Track
- Boundary, International
- Province or State — Marker
- County or District
- Reservations, Indian, Military, etc.

REFERENCE

- Horizontal Control Point — △
- Spot Elevation, in feet — .124
- Contours, Elevation — 5500, 5000
- Forest, Woods Scrub
- Depression — 5000, 4500
- Swamp or Marsh
- Approximate
- Glacier or Snowfield
- Stream, Intermittent
- Ferry
- W.L.125
- Mud
- Sand
- Dam
- Falls
- Lighthouse
- Airfield, on Land — Water — Landing Ground — Anchorage
- Power Transmission Line



NOTE: On the above index the sheets published are shown tinted green

GRID ZONE DESIGNATION 9V	TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 1000 METRES
100,000 M. SQUARE IDENTIFICATION: UP VP / UN VN (630, 40)	SAMPLE POINT: HORIZONTAL CONTROL POINT
	1. Read letters identifying 100 000 metre square in which the point lies — UN
	2. Locate first VERTICAL grid line to LEFT of point and read LARGE figures labeling the line either in the top or bottom margin or on the line itself. Estimate tenths from grid line to point — 62
IGNORE the SMALLER figures of any grid number; these are for finding the full coordinates. Use ONLY the LARGER figures of the grid number. example 330000	3. Locate first HORIZONTAL grid line BELOW point and read LARGE figures labeling the line either in the left or right margin or on the line itself. Estimate tenths from grid line to point — 74
	SAMPLE REFERENCE — UN6274
	If reporting beyond 18° in any direction prefix Grid Zone Designation as — 9VUN6274

TEN THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 9

ISKUT RIVER
SHEET 104 B
NO 9-10
AMS SERIES Q 501