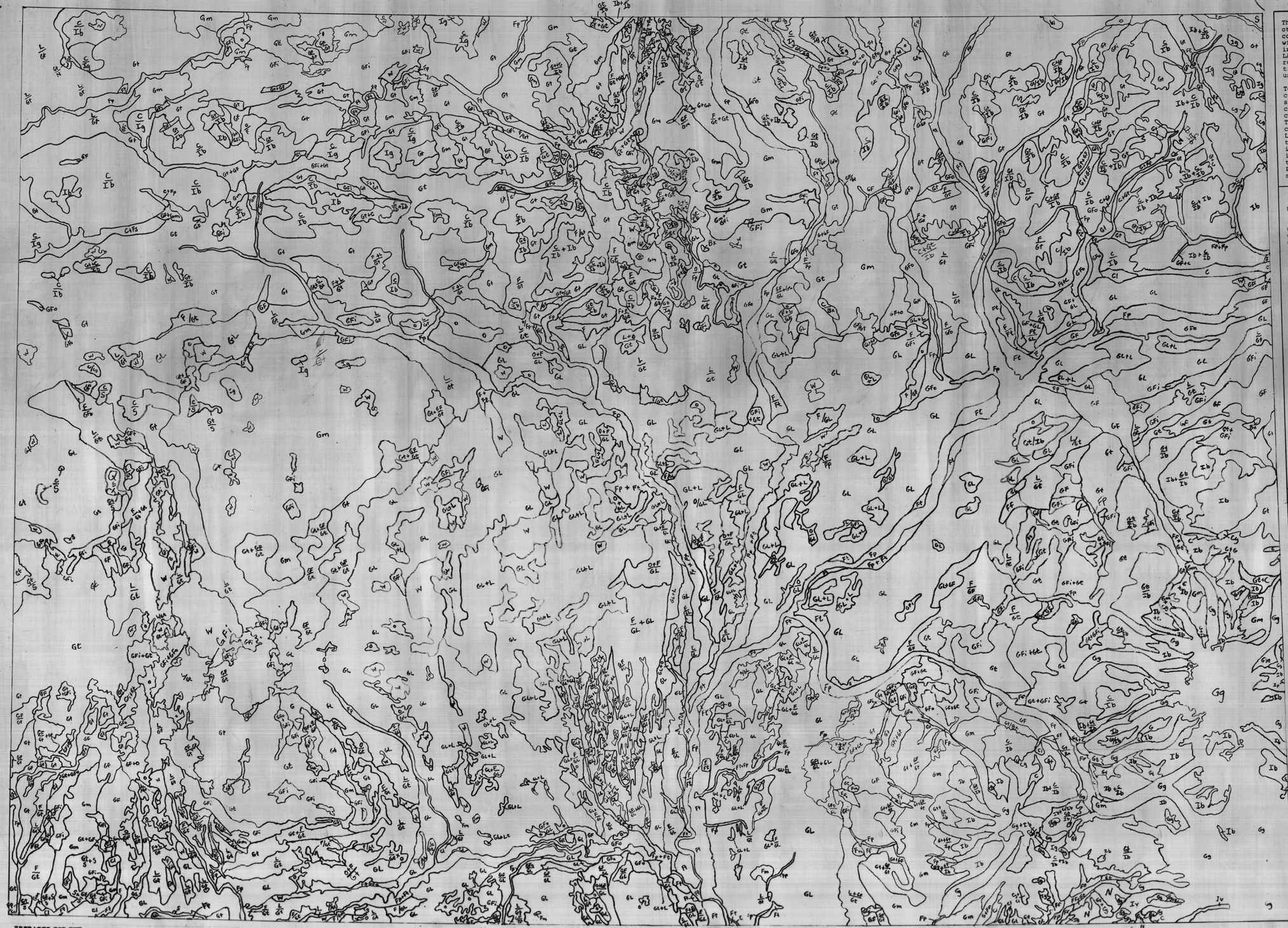
ALASKA DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

PUBLIC-DATA FILE 85-15b
SHEET 1 OF 43

147°00'
63°00'

144°00'
63°00'



62°00'
147°00'

62°00'
144°00'

ENGINEERING GEOLOGY

This map was based in part upon published geologic maps and other source documents. Terrain units were identified by correlating previously mapped surficial and bedrock geology with the terrain unit classification. Original photo-interpretation of color infrared aerial photography and LANDSAT imagery was used to improve boundary location and resolution, as well as to subdivide large-areas undifferentiated surficial geology units into appropriate terrain units. Minimum mapping resolution is 640 acres.

Terrain units consist of landform types and their constituent geologic materials occurring from the ground surface to a depth of 25 feet. A simple terrain unit consists of a single landform type; layered, mosaic, and complex terrain units consist of 2 or more landform types. The terrain unit classification is based on the heirarchial catalog of landform types developed for Alaska by Brown and Lau (1980) and Kreig and Reger (1976, 1980). Landform types are indentified by letter codes; uppercase letters indicate the origin of the deposit while lower case letters indicate the specific landform type within a group. See the User's Guide for the Copper River Area Resource Mapping Project for detailed descriptions of mapped units and documentation of mapping methods and sources.

UNCONSOLIDATED (SEDIMENTS) TERRAIN UNITS

C	Colluvial (gravity) Deposits
Cg	Rock Glacier
Cl	Landslide Deposits
E	Eolian (wind) Deposits
F	Fluvial (stream) Deposits
Fd	Fluvial (stream) Delta Deposits
Ff	Alluvial (stream) Fan Deposits
Fp	Floodplain (stream) Deposits
Ft	Fluvial (stream) Terrace Deposits
G	Glacial Deposits, undifferentiated
Gg	Glacier (ice)
Gm	Glacial Moraine (hilly) Deposits
Gt	Glacial Till (nearly level) Deposits
GF	Glaciofluvial (meltwater) Deposits, Undifferentiated
GFo	Glaciofluvial (meltwater) Outwash Deposits
GFi	Glaciofluvial (meltwater) Ice Contact Deposits
GL	Glaciolacustrine (mixed glacier and lake) Deposits
L	Lacustrine (lake) Deposits
M	Marine Deposits
O	Organic Deposits
W	Water Bodies

CONSOLIDATED (BEDROCK) TERRAIN UNITS

Bx	Bedrock, Undifferentiated
I	Igneous Bedrock, Undifferentiated
Ib	Extrusive Igneous Bedrock (lava flows)
Iga	Intrusive Acidic Bedrock (granitic rocks)
Igb	Intrusive Basic Bedrock (gabbroic rocks)
Ip	Pyroclastic Deposits (ash, cinder)
Ipv	Volcanic Cinder Cone
Iv	Composite Volcano
N	Metamorphic Bedrock, Undifferentiated
S	Sedimentary Bedrock, Undifferentiated

CONNECTIVES

— Layered terrain unit; one landform type overlying another

\+ Mosaic terrain unit; dominant component listed first. A mosaic terrain unit is composed of 2 discrete components, each of which comprises greater than 25% of the area of the polygon and which are too small and intricately mixed to separate.

EXAMPLES

Layered terrain unit:

Organic Deposits overlying Glacial Till Deposits

$\frac{O}{Gt}$

Mosaic terrain unit, dominant component listed first:

Floodplain Deposits and Fluvial Terrace Deposits

Fp + Ft

Complex terrain unit:

Metamorphic Bedrock and Colluvial Deposits overlying Metamorphic Bedrock

$N + \frac{C}{N}$

This document is intended only for general land management and planning purposes. There has been no field verification of the interpretation other than recourse to published and unpublished maps and reports. Projects which require site-specific data will require additional on-site investigation to verify terrain units, their characteristics, and their geotechnical properties.

PREPARED FOR THE
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
BY AGRA
ARCTIC GEO RESOURCE ASSOCIATES
PHOTO-INTERPRETED BY
ARCTIC GEO-TERRAIN CONSULTING
1984

SCALE 1:250,000

5 0 5 10 15 20 25 MILES
5 0 5 10 15 20 25 KILOMETERS

GULKANA QUADRANGLE
ENGINEERING GEOLOGY

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