

GRANULAR RESOURCE INVENTORY  
- MACKENZIE -  
TRAVAILLANT LAKE NTS 106 0  
(1:125,000)

Produced for Indian & Northern Affairs  
by Dept. of Energy, Mines & Resources



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GRANULAR RESOURCE INVENTORY - MACKENZIE

TRAVAILLANT LAKE NTS 106 0

Scale 1:125,000

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For: Department of Indian and  
Northern Affairs



## SUMMARY

Sand and gravel deposits are ubiquitous but small and widely separated in the Travaillant Lake map area. Glaciofluvial sand and gravel comprise the majority of the unconsolidated granular deposits.

The bedrock that has been mapped can be grouped into Devonian shale and Cretaceous sandstone. The shale and sandstone can be ripped for subgrade material.

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Figure Travaillant Lake: physiographic regions

- Map 1) Unconsolidated granular materials and granular  
resource areas (1 map)
- 2) Bedrock geology overlay

## INTRODUCTION

This report attempts to assess the quality and quantity of granular material available for construction from both unconsolidated and bedrock sources. Sand and gravel of glaciofluvial and fluvial origin are good sources of construction material. In general moraines are potential sources of construction material only where they are known to be hummocky and to contain some coarse granular material.

Bedrock, such as sandstone and limestone, is evaluated as a source of aggregate if it is coherent and resistant to weathering in its natural state. Shales are considered to be a source of subgrade material.

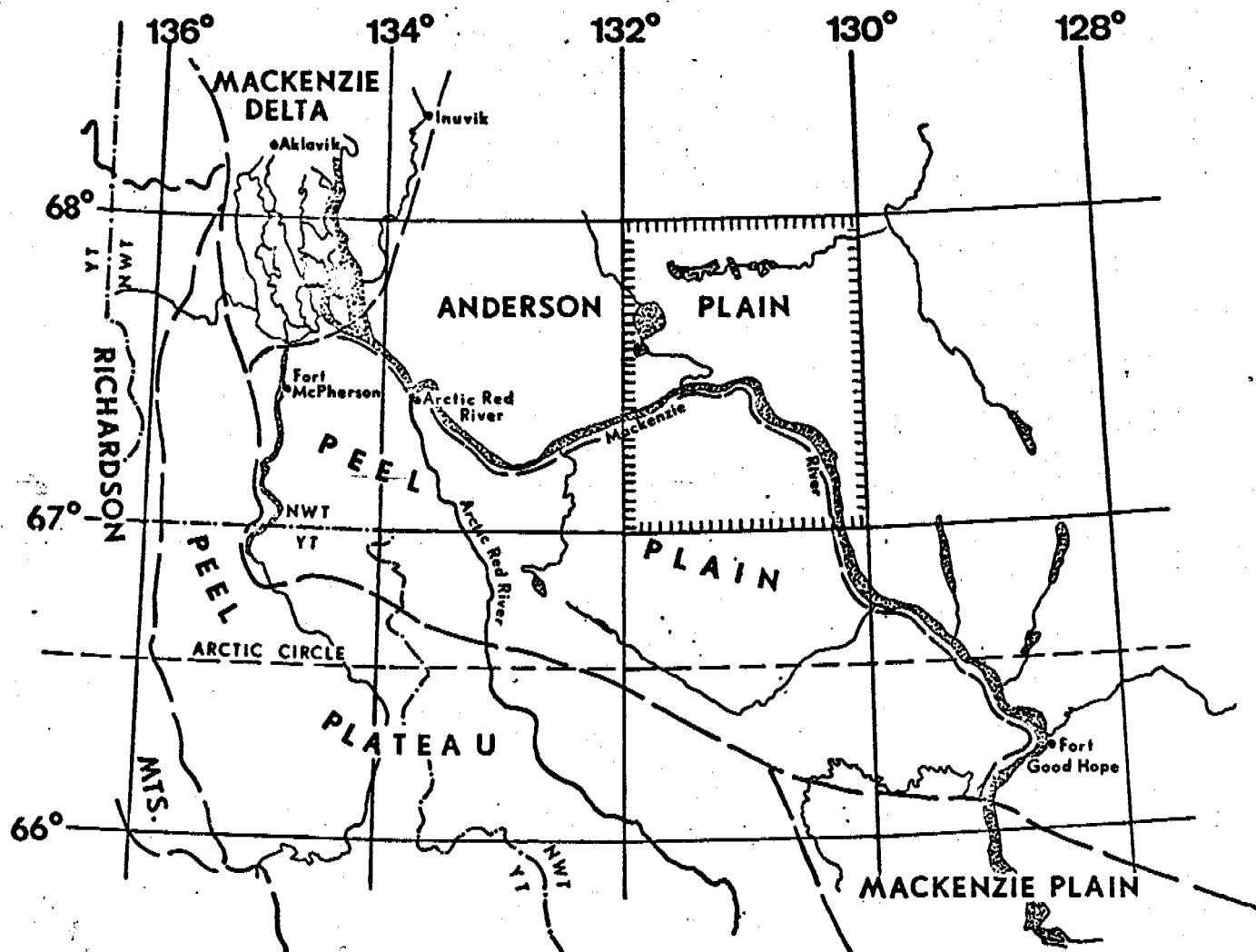
The information in this report and on the accompanying map has been compiled largely from published and unpublished Geological Survey manuscripts and from personal communication with officers of the Geological Survey of Canada. Supplementary data on depths, thicknesses, texture and ice content have been obtained from confidential reports of other government departments and from industry. Field checking was carried out during the summer of 1972.

The basic document used in this compilation, and from which all areal data were derived, is a surficial geology map of the Travaillant Lake map area at a scale of 1:125,000 (Hughes, 1972). It is indexed as G.S.C. Open File 108 and may be viewed at Geological Survey of Canada offices in Ottawa, Calgary and Vancouver. Ozalid copies may be obtained commercially at nominal cost. The derived map for unconsolidated granular material has been produced at the same scale.

Areal extent of granular deposits was measured by planimeter. An average thickness for each deposit was estimated from the data mentioned above and reduced according to such variables as drainage, height above the water table and amount of ground ice. A volume of granular material for each deposit was calculated from these considerations of area and thickness. These volumes of available sand and gravel appear in a tabular summary at the end of the report.

A bedrock geology map has been prepared as an overlay sheet from a Geological Survey manuscript bedrock map (Cook, 1972). The rock units are grouped according to gross lithology and age on this map. The map indicates the availability of bedrock for construction purposes as an alternative to unconsolidated material.

For convenience in description, areas of granular material are numbered in Roman numerals on the granular resource map. Each area is sequentially listed in the tabular summary of materials in the report.



## TRAVAILLANT LAKE

PHYSIOGRAPHIC REGIONS

0 MI. 80

after BOSTOCK 1967

## GENERAL GEOLOGY AND PHYSIOGRAPHY

Two physiographic regions are represented in the Travaillant Lake map area: the Anderson Plain north of the Mackenzie River; the Peel Plain south of the river. In both physiographic regions deposits of sand and gravel are widely separated. Bedrock ridges and topographic highs in both regions generally are composed of sandstone. Underlying shales are exposed only in the river valleys.

### Unconsolidated Deposits

#### Glaciofluvial Deposits, sand and gravel, G

Sand and gravel of glaciofluvial origin occur in the Travaillant Lake map area as outwash plains, terrace and channel deposits and as eskers and kames (gravel mounds). The topography of these deposits is generally hummocky or rolling.

The outwash, terrace and channel deposits in this map area are usually not more than one square mile in area and are widely separated. The exception to this generality is the concentration of glaciofluvial deposits in the vicinity of the confluence of the Thunder River with the Mackenzie River.

Sand and gravel are also found in eskers and kames. The eskers, sinuous ridged glaciofluvial deposits, attain a maximum length of two miles. Kames in this map area may be discontinuous eskers.



Because these glaciofluvial deposits are comprised of grained material and are generally well drained it is estimated that 80% of the sand and gravel is available as granular construction material.

#### Alluvial (Fluvial) Deposits, sand and gravel, A

Sand and gravel occur only in one alluvial deposit in the Travaillant Lake map area. The alluvial fan deposit is situated in the northeast corner of the map area. Because it is in a low-lying region, the water table in the deposit is higher than that of the glaciofluvial deposits. It is probable that the ground ice content is also greater. Fifty per cent of the sand and gravel material is an estimate of the available granular resource material.

#### Morainal Till, M

A discontinuous morainal ridge, considered to be a terminal moraine, extends diagonally southeast-northwest across the entire Travaillant Lake map area. It is composed of till, an unsorted mixture of gravel, sand, silt and clay. Although the available sand and gravel in this type of deposit is generally less than 10%, the ridge is a topographic high and has less ground water and ground ice than low-lying deposits. Therefore where sand and gravel deposits are scarce this material could be used as subgrade construction material.

## Bedrock

The bedrock of the eastern and northern portions of the Travaillant Lake map area has been mapped (Cook, 1972). It can be grouped into two broad classifications: Devonian shale and Cretaceous sandstone.

The Devonian shale is composed of the Imperial, Canol and Hare Indian Formations. Generally the shale is brown to black and is fissile (splits easily into plate shaped fragments). It is easily eroded and exposures are rare except in some river valleys. Devonian shale underlies most of the map area at variable depths below the ground surface.

The Cretaceous sandstone, similar to that found in the Fort Good Hope map area, is weakly cemented, coarse-grained and porous. Many deposits consist of unconsolidated coarse to fine white quartz. Because this sandstone is more coherent than the neighbouring Devonian shales, the Cretaceous sandstone deposits occur as topographic highs.

## MATERIALS

The Travaillant Lake map area has many sand and gravel deposits but, in general, they are less than one square mile in area and are widely separated. The greatest concentration of unconsolidated granular material is located in the area of the confluence of the Thunder River with the Mackenzie River. Ground ice and ground water are minimal in most sand and gravel deposits, therefore a large percentage of the material is available as granular construction material.

The morainal ridges composed of glacial till are relatively dry but usually contain less than 10% usable granular material.

Cretaceous sandstone, because it is weakly cemented, can be crushed or ripped to obtain subgrade material. The Devonian shale is fissile, relatively ice-free and rippable and therefore could be used for subgrade construction material. The bedrock in most places is covered by a variable thickness of unconsolidated material.

TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
Area I LITTLE CHICAGO				
a) <u>sGp</u> glaciofluvial plain; sand.	2.30	40	95.98	57.58
b) <u>Ghpk</u> glaciofluvial hummocky, plain, kettled thermo- karst; sand and gravel.	1.48	40	61.85	49.40
c) <u>sgGp</u> glaciofluvial plain; sand and gravel.	.70	40	14.65	11.72
d) <u>Gpk</u> glaciofluvial plain, kettled thermokarst; sand and gravel.	.35	40	7.33	5.86
e) Eskers; 3; sand and gravel.	1.60 mi	10	.05	.04
Area II SOUTH-WEST OF LITTLE CHICAGO				
a) <u>Ghc</u> glaciofluvial hummocky channelled; sand and gravel.	1.95	10	20.31	16.24
b) <u>Gf</u> glaciofluvial fan; sand and gravel.	.98	10	10.16	8.12
c) <u>Gh Gh/fo</u> glaciofluvial hummocky; sand and gravel; organic.	.43	10	4.51	3.56
d) <u>Gm</u> glaciofluvial rolling; sand and gravel.	.43	10	4.46	3.56
e) Esker; sand and gravel.	.40 mi.	10	.01	.01

TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
Area III SOUTHWEST CORNER OF MAP AREA				
a) <u>Gph</u> glaciofluvial plain; hummocky; sand and gravel.	1.40	10	14.52	11.67
b) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	1.64	10	17.04	14.50
c) <u>Gp</u> glaciofluvial plain; sand and gravel.	.16	10	1.63	1.30
d) <u>Gch</u> glaciofluvial channelled hummocky; sand and gravel.	1.02	10	10.55	8.43
e) Esker; sand and gravel.	1.00 mi	10	.03	.02
f) Eskers; seven small units; sand and gravel.	2.40 mi	10	.07	.06
g) Mounds; ten small deposits; gravel.				
Area IV SOUTH OF MACKENZIE RIVER				
a) <u>Ghr</u> glaciofluvial hummocky ridged; sand and gravel.	7.54	10	78.42	62.73
b) <u>Gp</u> glaciofluvial plain; sand and gravel.	.57	10	5.29	4.23
c) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	.17	10	6.89	5.51

TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated volume Granular Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
d) <u>Gt</u> glaciofluvial terraced; sand and gravel.	.31	10	3.26	2.60
e) <u>Gm</u> glaciofluvial rolling; sand and gravel.	.43	10	5.46	3.56
f) <u>Gr</u> glaciofluvial ridged; sand and gravel.	.59	10	6.09	4.86
g) Eskers; four individual units; sand and gravel.	3.40 mi	10	.10	.08
h) Eskers; two small units; sand and gravel.	.40 mi	10	.01	.01
i) Mounds; four small units; sand.				
Area V TRAVAILLANT RIVER				
a) <u>Gct</u> glaciofluvial channelled, terraced; sand and gravel.	.23	20	4.86	3.88
b) <u>Gct, Gc</u> glaciofluvial channelled, terraced; sand and gravel.	.58	20	12.19	9.74
c) <u>Ght</u> glaciofluvial hummocky, terraced; sand and gravel.	1.01	20	21.11	16.88
d) <u>Gt</u> glaciofluvial terraced; sand and gravel.	.27	20	2.83	2.26
e) Esker; sand and gravel.	.80 mi	10	.02	.02
Area VI EAST OF TRAVAILLANT LAKE				
a) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	9.84	20	204.73	163.78

TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
b) <u>Gt</u> glaciofluvial terraced; sand and gravel.	.47	20	9.72	7.77
c) <u>Gcp</u> glaciofluvial channelled, plain; sand and gravel.	.23	20	2.43	1.94
d) <u>G</u> glaciofluvial undiffer- entiated; sand and gravel.	.08	20	1.60	1.28
e) Mounds; 6; gravel.				
Area VII NORTH-EAST OF TRAVAILLANT LAKE				
a) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	.24	15	3.23	2.58
b) <u>Gt</u> glaciofluvial terraced; sand and gravel. (appendix II, Station 68)	.48	15	9.72	7.76
c) <u>Ghr Gr</u> glaciofluvial hummocky; ridged; sand and gravel.	.28	15	5.72	4.56
d) Mound; gravel.				
Area VIII CROSSING CREEK- NORTH SHORE				
a) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	.08	40	3.20	2.56
b) <u>Gt</u> glaciofluvial terraced; sand and gravel.	.74	40	30.93	24.74

TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
c) <u>Gct</u> glaciofluvial channelled terrace; sand and gravel.	1.58	40	75.05	50.02
d) Esker; sand and gravel.	2.0 mi	10	.06	.04
Area IX NORTHWEST OF TENLEN LAKE				
a) <u>Grh</u> glaciofluvial ridged, hummocky; sand and gravel.	.59	40	24.39	19.57
b) <u>Gt</u> glaciofluvial terraced; sand and gravel.	.08	40	3.20	2.56
c) Eskers; two small units; sand and gravel.	1.06 mi.	10	.03	.02
d) Mounds; three small deposits; gravel.				
Area X TENLEN LAKE				
a) <u>Gt</u> glaciofluvial terraced; sand and gravel.	6.60 mi.	15	274.86	219.88
b) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	.12	15	4.93	3.94
c) <u>Gc</u> glaciofluvial channelled; sand and gravel.	.86	15	17.85	14.28
d) Mounds; thirteen small deposits; gravel.				
Area XI NORTH OF TENLEN LAKE				
<u>Gct</u> glaciofluvial channelled, terraced; sand and gravel.	1.68	15	64.98	55.98



TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
Area XII NORTHEAST CORNER OF MAP AREA.				
a) <u>Gt</u> glaciofluvial terraced; sand and gravel. (appendix II, station 70)	1.40	15	21.95	17.56
b) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	.12	15	1.85	1.48
c) <u>Gr</u> glaciofluvial ridged; sand and gravel.	.12	15	1.85	1.48
d) <u>sgAf</u> alluvial fan; sand and gravel.	.78	15	12.20	6.10
e) Mounds; thirteen small deposits; gravel.				
Area XIII SOUTH OF AREA XII				
a) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	1.49	15	23.20	18.56
b) <u>Gt</u> glaciofluvial terraced; sand and gravel.	.78	15	12.20	9.76
c) <u>gGt</u> glaciofluvial terraced; gravel.	.53	15	11.39	9.11
d) <u>Ght</u> glaciofluvial hummocky; terraced; sand and gravel.	.47	15	7.30	5.84
e) Mounds; eleven; gravel.				

TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
Area XIV NORTH OF THUNDER RIVER				
a) <u>Gtc</u> glaciofluvial terraced; channelled; sand and gravel.	.43	15	6.70	5.36
b) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	.59	15	9.15	7.32
c) <u>Gt</u> glaciofluvial terraced; sand and gravel.	.23	15	3.65	2.92
d) Eskers; four small units; sand and gravel.	1.75 mi.	10	.05	.04
Area XV BETWEEN THUNDER RIVER AND TENLEN LAKE				
a) <u>Ghr</u> glaciofluvial hummocky; ridged; sand and gravel.	.63	15	12.44	9.95
b) <u>Gr</u> glaciofluvial ridged; sand and gravel.	.31	15	4.90	3.92
c) Eskers; two small units sand and gravel.	1.2 mi	10	.04	.03
d) Mounds; two small deposits; gravel.				
Area XVI UPPER THUNDER RIVER				
a) <u>Gt</u> glaciofluvial terraced; sand and gravel.	2.07	15	43.09	34.47
b) <u>Gct</u> glaciofluvial channel- led; terraced; sand and gravel.	3.05	15	63.40	50.72

TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
a) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	.31	15	4.90	3.92
d) <u>Gp</u> glaciofluvial plain; sand and gravel.	.16	15	2.45	1.96
e) Eskers; four individual units; sand and gravel.	1.6 mi	10	.05	.04
f) Mounds; four deposits; gravel.				
Area XVII THUNDER RIVER				
a) <u>Gpc</u> glaciofluvial plain, channelled; sand and gravel.	2.03	15	42.29	33.83
b) <u>Ghk</u> glaciofluvial hummocky; kettled thermokarst; sand and gravel.	.70	15	10.95	8.76
c) <u>Ghr</u> glaciofluvial hummocky; ridged; sand and gravel.	.59	15	9.15	7.32
d) <u>Gt</u> glaciofluvial terraced; sand and gravel. (appendix II, station 72)	.36	15	5.5	4.4
e) Eskers; two individual units; sand and gravel.	3.0 mi	10	.08	.07
Area XVIII EAST OF MACKENZIE RIVER				
a) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	1.44	40	60.12	48.09

TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
b) <u>Gc</u> glaciofluvial channelled; sand and gravel.	.47	40	19.46	15.56
c) Eskers: two small units; sand and gravel.	3.0 mi	10	.08	.07
Area XIX NORTHEAST OF LITTLE CHICAGO				
a) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	.12	40	4.93	3.94
b) <u>Gm</u> glaciofluvial rolling; sand and gravel.	.16	40	6.53	5.22
Area XX TUTSIETA LAKE				
a) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	1.29	40	53.71	42.95
b) <u>gGr</u> glaciofluvial ridged; gravel. (appendix II, station 51)	.55	40	5.69	4.55
c) <u>Gp</u> glaciofluvial plain; sand and gravel.	.20	40	8.13	6.50
d) <u>G</u> glaciofluvial undiffer- entiated; sand and gravel.	.12	40	4.93	3.94
e) Mounds; two small deposits; gravel.				
Area XXI UNMAPPED AREA- EASTERN BOUNDARY				
a) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	.67	40	27.59	21.06

TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
b) <u>Gk</u> glaciofluvial kettled thermokarst; sand and gravel.	.20	40	8.13	6.50
c) Eskers; five individual units; sand and gravel.	2.6 mi	10	.08	.06
d) Mounds; three small deposits; gravel.				
Area XXII UNMAPPED AREA- NORTHERN BOUNDARY				
a) <u>Gpk</u> glaciofluvial plain; kettled thermokarst; sand and gravel.	4.10	40	57.25	45.78
b) <u>Gcr</u> glaciofluvial channelled, ridged; sand and gravel. (appendix II, station 73)	5.23	40	54.45	34.56
c) <u>Gt</u> glaciofluvial terraced; sand and gravel.	.71	40	29.19	23.34
d) Mounds; five small deposits; sand and gravel.				
Area XXIII UNMAPPED AREA				
a) <u>Chk</u> glaciofluvial hummocky; kettled thermokarst.	3.55	10	36.96	29.56
b) <u>Gp</u> glaciofluvial plain; sand and gravel.	1.06	10	15.88	12.69
c) <u>Gtc</u> glaciofluvial terraced, channelled; sand and gravel.	.63	10	25.99	20.78

TABULAR SUMMARY

Description and Material	Area (sq. mi.)	Estimated Average Thickness (ft.)	Estimated Volume of Granular Material (yds <sup>3</sup> x 10 <sup>6</sup> )	
			total	available
d) <u>sGp</u> glaciofluvial plain; sand.	1.48	10	15.45	12.56
e) <u>Gh</u> glaciofluvial hummocky; sand and gravel.	2.33	10	24.37	19.47
f) <u>Ghr</u> glaciofluvial hummocky, ridged; sand and gravel.	.98	10	23.55	18.83
g) <u>Gt</u> glaciofluvial terraced; sand and gravel.	.92	10	10.58	8.44
h) Esker; sand and gravel.	1.0 mi	10	.03	.02
i) Mounds; about twelve small deposits; sand and gravel.				

SOURCES OF INFORMATION

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1967: Physiographic Regions of Canada, Geol. Surv. Can., map 1254A

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1972: Surficial Geology Map of Travaillant Lake, Geol. Surv. Can., Open File 108.

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1967: Glacial Map of Canada, Geol. Surv. Can., Map 1253A.

## APPENDIX I, Part I

## Unconsolidated Granular Materials

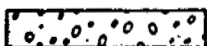
Each map sheet has a surficial geology legend (see appendix). This legend, differentiated by means of patterns, only indicates granular material classified by genetic characteristics. In some cases only part of a map unit has been patterned, indicating that only that portion is considered a suitable source for granular material.

Legend

## GLACIOFLUVIAL



coarse grained granular material: cobbles, pebbles, gravel; may be mixed with some coarse sand

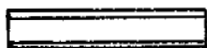


mixed or interbedded sand and gravel

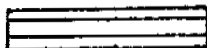


predominantly sand or sand with some fine material

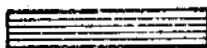
## GLACIOLACUSTRINE



coarse grained granular material: cobbles, pebbles, gravel; may be mixed with some coarse sand.



mixed or interbedded sand and gravel



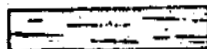
predominantly sand or sand with some fine material

## FLUVIAL



only sand and gravel deposits are patterned

## MORAINAL

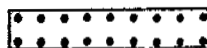


predominantly till; unsorted matrix of silt, clay, and sand imbedded with pebbles, cobbles and boulders

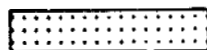
## MARINE



coarse grained granular material: cobbles, pebbles, gravel; may be mixed with coarse sand



mixed or interbedded sand and gravel



predominantly sand or sand with some fine material



EOLIAN



fine and medium sandy material

COLLUVIUM

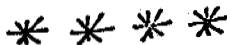


only the patterned area is coarse grained

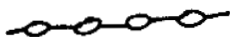
Symbols



eskers



gravel mounds



morainal ridge found within moraine

## APPENDIX I Part (11)

## Bedrock Geology

(black line overlay)

The rock units which appear on the accompanying overlay are a geological grouping according to gross lithology and age.

These units were derived from a more detailed geological map, whose units were subdivided largely on the basis of airphoto and stratigraphic interpretation. The units are identified by a two component code. The first component is upper case and designates age which is followed by a mnemonic designating gross lithology. e.g. Dls - Devonian limestone. When no lithology follows the age component, the unit is composed of many of the rock types listed below.

Legend

Age	Lithology
T - Tertiary	car - carbonate
K - Cretaceous	limestone and/or dolomite
JR - Jurassic	ls - limestone
TR - Triassic	dol - dolomite
Pr - Permian	ss - sandstone
C - Carboniferous	sh - shale
D - Devonian	
S - Silurian	no mnemonic component
O - Ordovician	indicates unit is composed
€ - Cambrian	of many of the above rock
P - Precambrian	

Symbols

Boundary of bedrock unit (approximate)

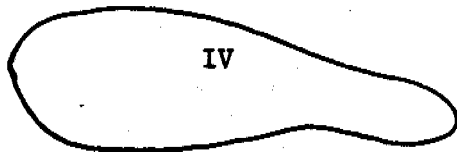
Boundary of bedrock unit inferred in  
areas of surficial cover

Limit of mapping.

APPENDIX I Part (iii)

GRANULAR RESOURCE UNITS

Granular Resource Areas (black)



See text for corresponding description

## APPENDIX I, Part (iv)

## Surficial Geology and Landforms

TEXTURE	GENESIS	MORPHOLOGY	SLOPE (superscript)
f fen	O organic	v veneer	1 moderate
p peat	M morainic	p plain	( < 50)
c clay	G glaciofluvial	d drumlin	2 steep
si silt	L lacustrine	s fluted striated	(5° - 15°)
s sand	A alluvial	t terrace	
g gravel	fluvial	h hummocky	>15° normally
b boulder	C colluvial	r ridged	in Cx unit
t till	E eolian	e eroded	
	U upland, rolling	f fan	
	bedrock controlled	m rolling	
	R rock outcrop	c channelled	
		k kettled	
		thermokarst	
		x complex	

## Complex Units:

e.g. in: Mp-f0, f0 constitutes 25% to 49% of area  
: Mp/f0, f0 = 5% - 24% of area

Using all four elements of the legend, a smooth ground moraine surface with moderate slope would be tMp<sup>1</sup>; hummocky and ridged glaciofluvial gravel would be gGhr. Note that there are inconsistencies in the use of Mp and Mv mainly because of the difficulty in estimating till thickness.

## APPENDIX II

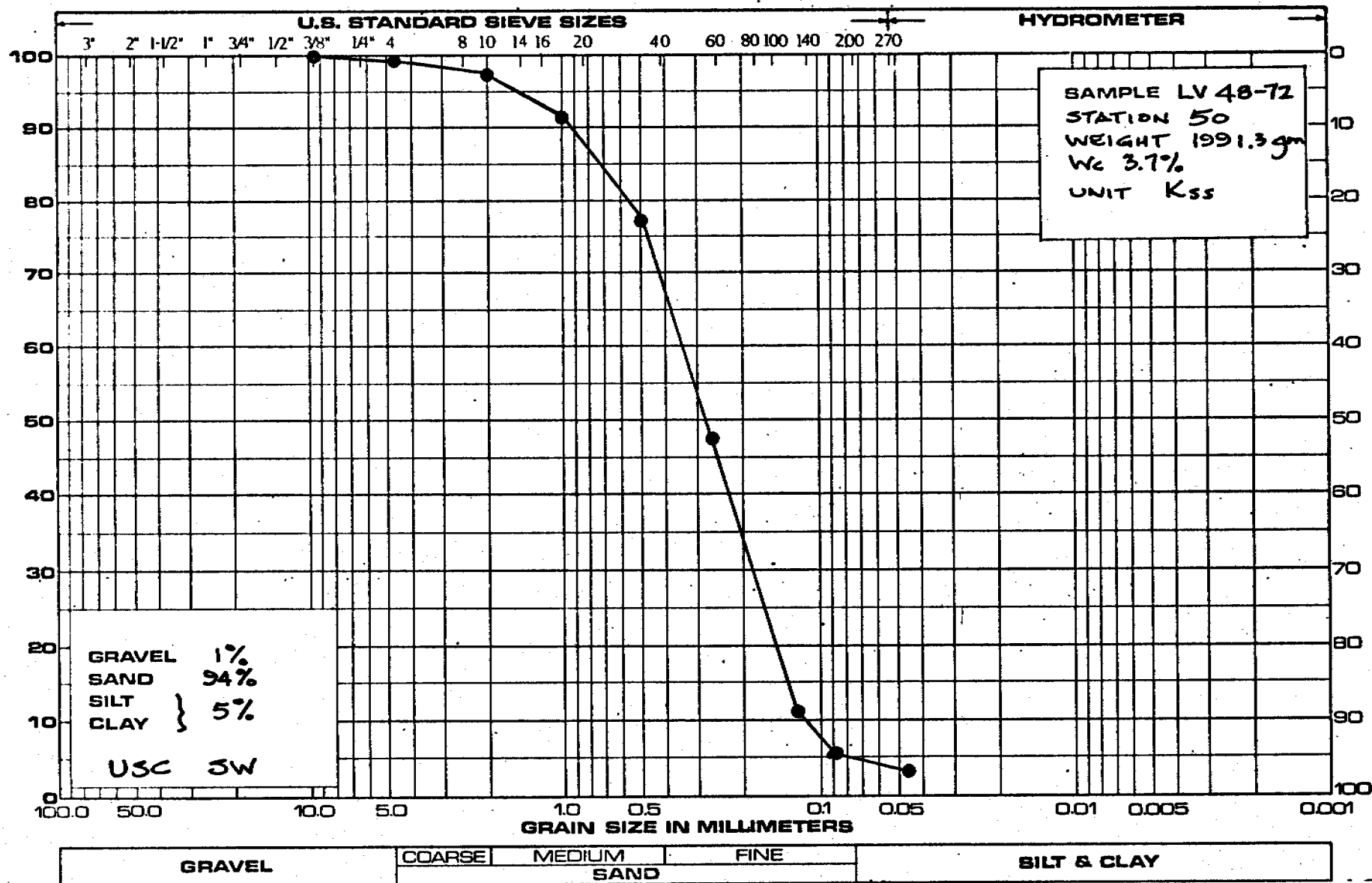
## TEXTURAL DATA

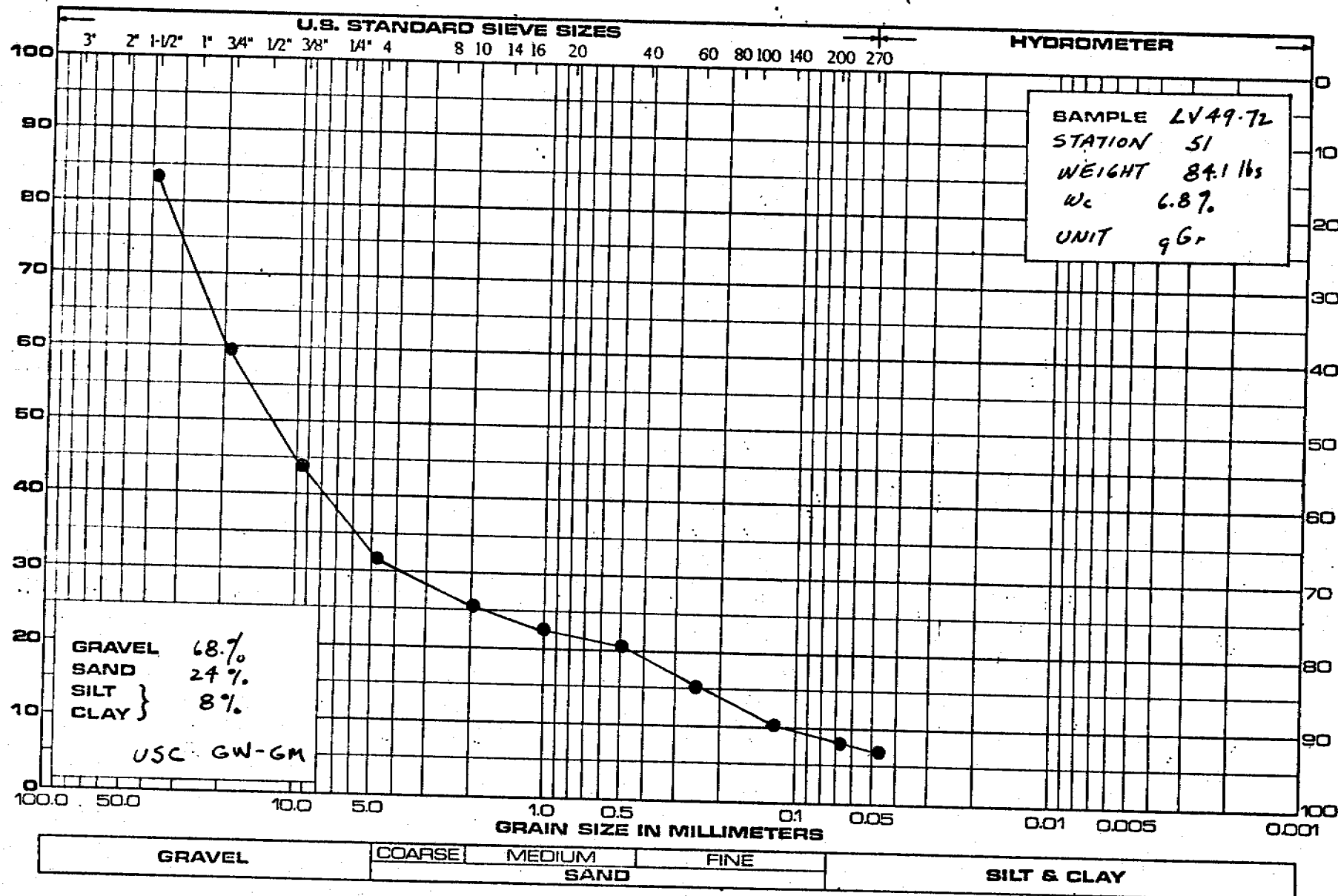
Samples, from which the textural data are derived, were gathered during the summer of 1972 when spot checking of surficial and bedrock sources of granular materials was carried out.

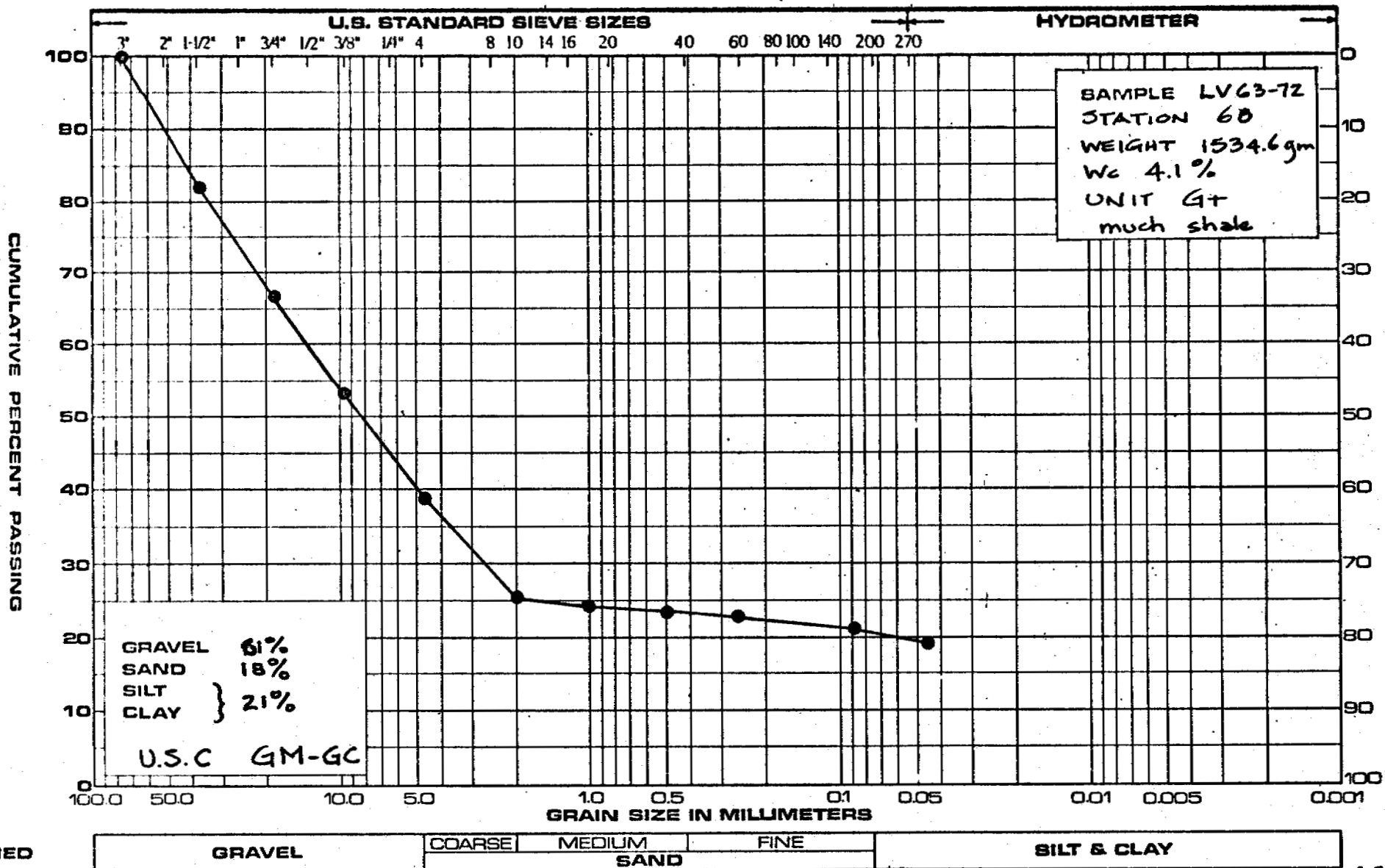
Reference to samples is given by station and sample number. Cross reference with the "Tabular Summary" and U.T.M. grid is included so that location of textural data can be established on the 1:125,000 Granular Resources Map and on a 1:250,000 scale topographical map.

## SAMPLE LOCATIONS

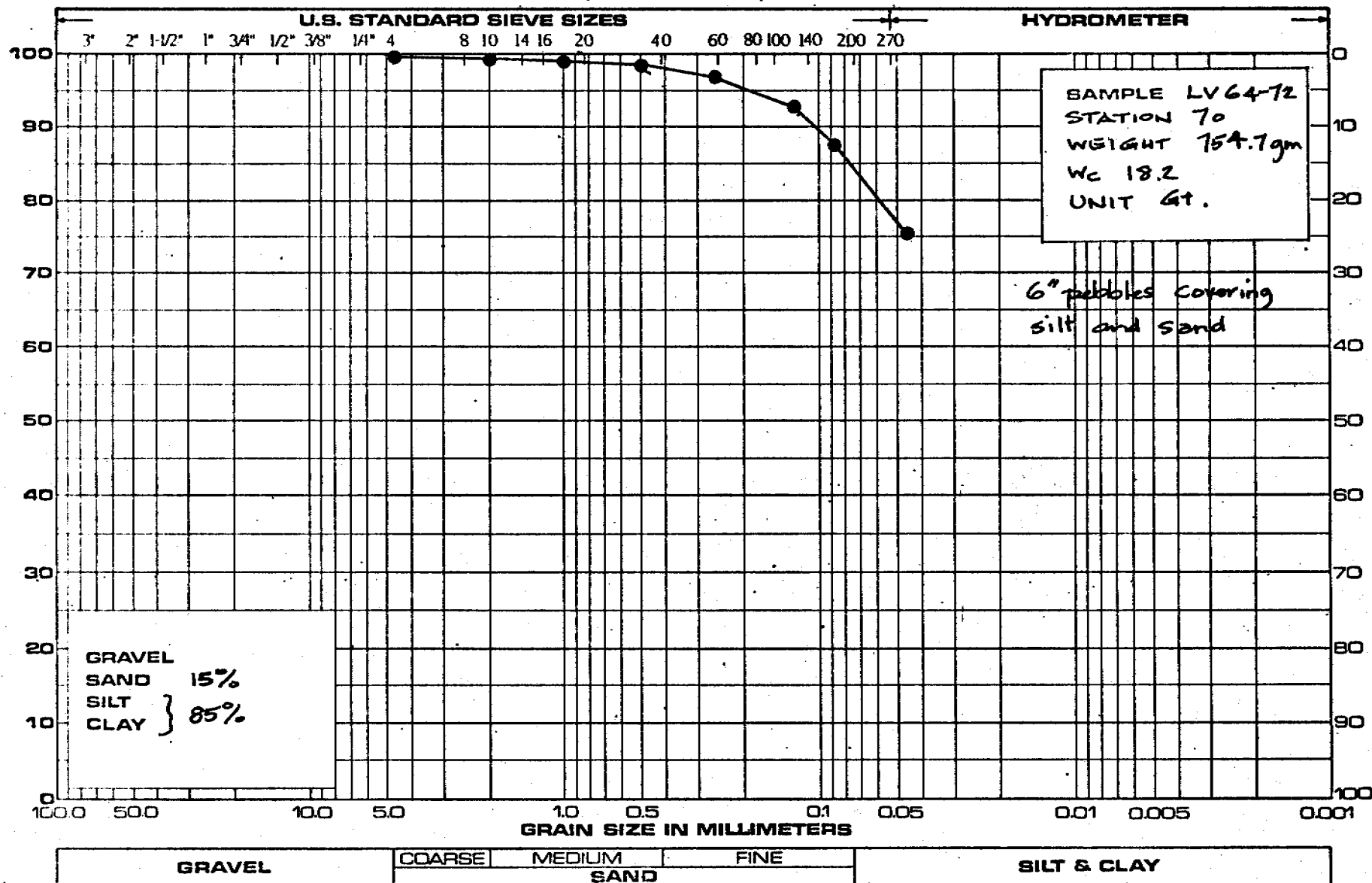
STA	SAMPLE	TABULAR SUMMARY		GRID REFER. U.T.M.
		AREA	UNIT	
50	LV48-72	XVIII	Kss	VE427828
51	LV49-72	XX	gGr	VE543616
68	LV63-72	VII	Gt	VF000246
70	LV64-72	XII	Gt	VF378268
72	LV65-72	XVII	G	VE218869
73	LV66-72	XXII	G	VE070769

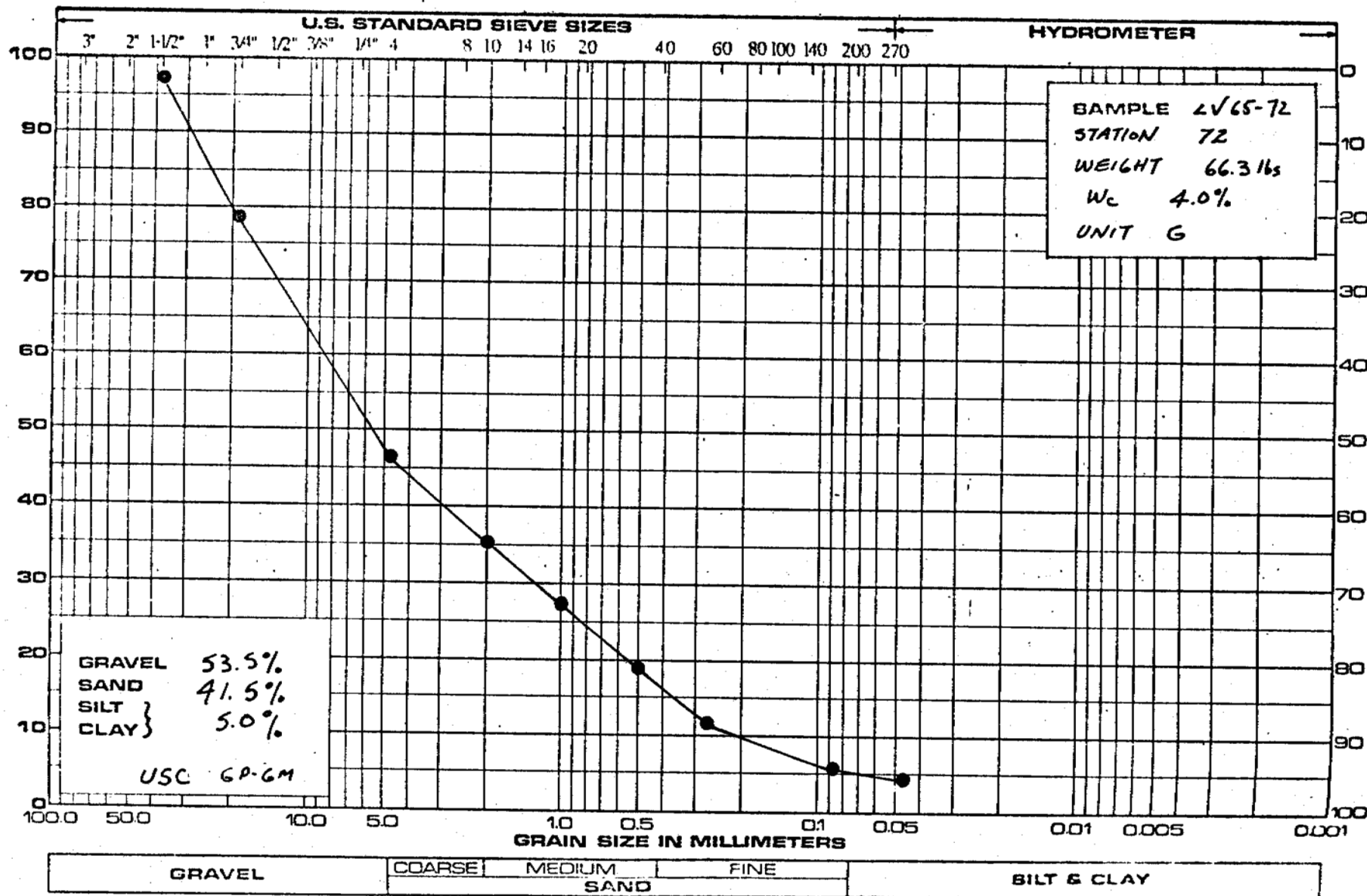








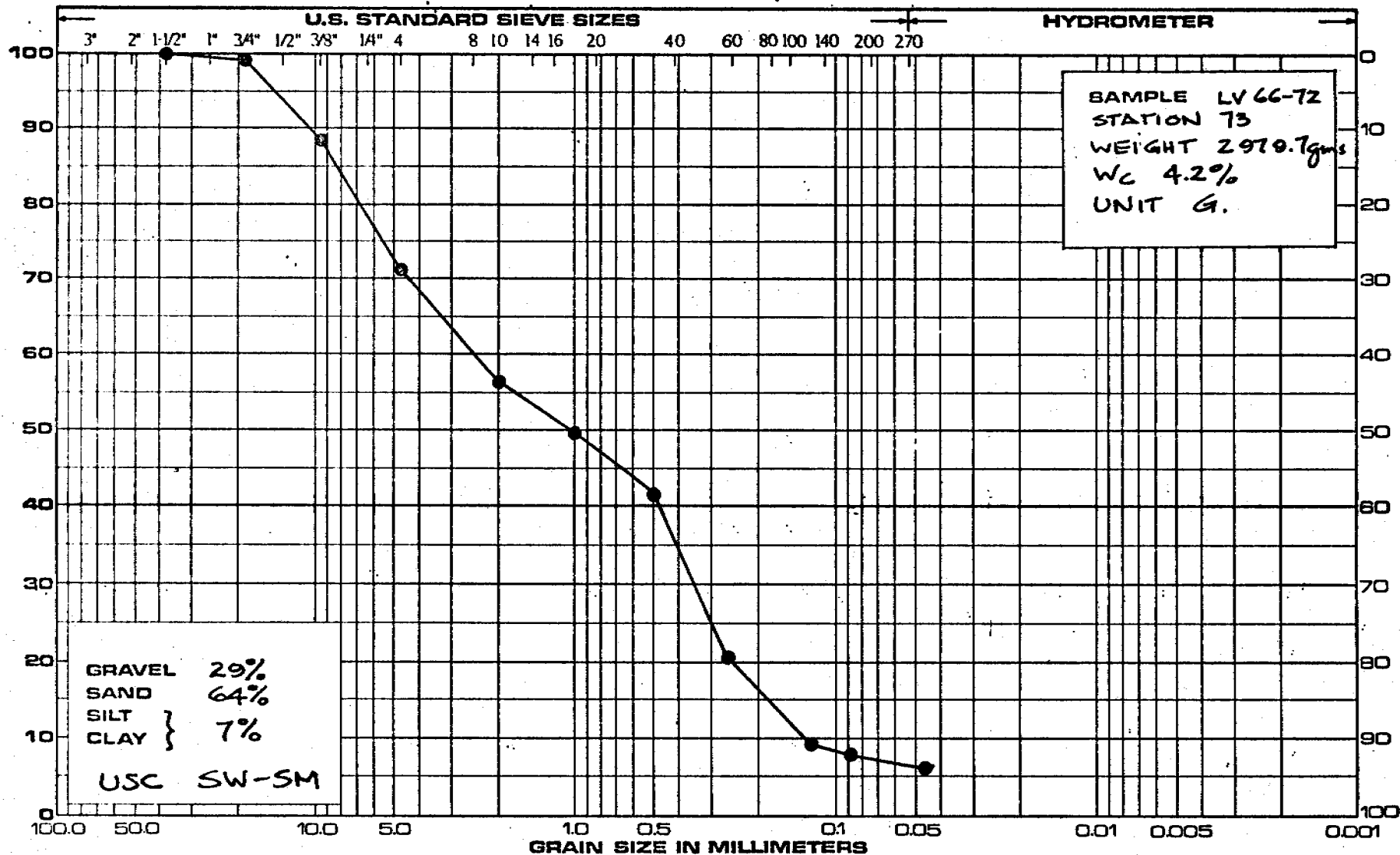




# PARTICLE SIZE DISTRIBUTION

CUMULATIVE PERCENT PASSING

CUMULATIVE PERCENT RETAINED



UNIFIED

GRAVEL	COARSE	MEDIUM	FINE	SILT & CLAY
	SAND			



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 DEPARTMENT OF ENERGY, MINES AND RESOURCES