PRELIMINARY MATERIALS MAP, MASSACHUSETTS PORTION OF THE STATE LINE QUADRANGLE, MASSACHUSETTS-NEW YORK,

BY
G. WILLIAM HOLMES

U. S. Geological Survey:

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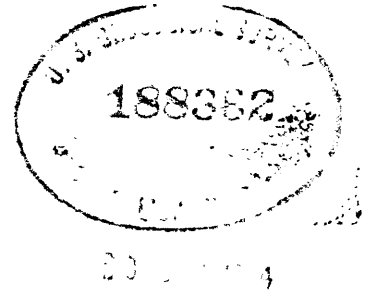
64-84



Field and megascopic observations:

Station number 1

Location: County Berkshire Town West Stockbridge Pit X Active ___ Inactive

Road location 500' north of Wilson Road just south of Silver Birch Camp Coordinates 42°18' N. 73°24'30" W.

Geologic unit or occurrence ice contact stratified drift in kame

Textural description sandy gravel Eng. Soil Type GW

Dimensions of deposit: Areal extent 200' x 300' Estimated thickness 25'

Dimensions of pit: Areal extent 100' x 200' Exposed thickness 15'

Lithologic composition (approximate %) 55% schist, 20% limestone

Grain size: Maximum 12" Mean 0.5" Est. % of sand ___ Est. % fines ___

Rounding subrounded Grading well Sorting medium

Soil development 6" A 10yr 4/4 28" B 10yr 5/6 Color C horizon 10yr 6/4 (moist)

Oxidation or staining Little or none below B horizon Leaching ___

Secondary deposition ___ Reactive matter $CaCO_3$

Section:

Rock type	

General Description: Pit walls very badly slumped. Greater part of area has been graded. One exposure remains on west side.

QUADRANGLE State Line

STATE Massachusetts

GEOLOGIST J. Atherton

DATE August 1963

PROJECT Mass. Materials

Weld - Int. 2905

GEOLOGIC DIVISION
U.S. GEOLOGICAL SURVEY
Washington, D. C.

For release JUNE 5, 1964

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1. Preliminary geologic map and structure sections of the central York Mountains, Seward Peninsula, Alaska, by C. L. Sainsbury. 1 map. Alaska Div. of Mines and Minerals, State Capitol Bldg., Juneau, Alaska; U. S. Geological Survey, Brooks Memorial Bldg., College, Alaska; 516 E. 5th Ave., Anchorage, Alaska; South 157 Howard St., Spokane, Wash.; 232 Appraisers Bldg., San Francisco, Calif.; 1031 Bartlett Bldg., Los Angeles, Calif.; 468 New Custom House, Denver, Colo.; 602 Thomas Bldg., Dallas, Texas.

2. Geologic map of the Topopah Spring SW quadrangle, Nevada (TEI-846), by P. W. Lipman and E. J. McKay. 1 map, scale 1:24,000. 468 New Custom House, Denver, Colo.; 8102 Federal Office Bldg., Salt Lake City, Utah; 232 Appraisers Bldg., San Francisco, Calif.; 1031 Bartlett Bldg., Los Angeles, Calif.; Library, Mackay School of Mines, University of Nevada, Reno, Nev.

3. Preliminary materials map, Ashley Falls quadrangle, Massachusetts-Connecticut, by G. William Holmes. 1 map, scale 1:24,000; 22 data sheets. Room 1, 270 Dartmouth St., Boston, Mass.; Massachusetts Dept. of Public Works, 100 Nashua St., Boston, Mass.; U. S. Bureau of Public Roads, 31 St. James Ave., Boston, Mass. Copies from which reproductions can be made at private expense are available for this and the following 3 reports at the 270 Dartmouth St. address.

4. Preliminary materials map, Massachusetts portion of the Egremont quadrangle, Massachusetts-New York, by G. William Holmes. 1 map, scale 1:24,000; 11 data sheets. Room 1, 270 Dartmouth St., Boston, Mass.; Massachusetts Dept. of Public Works, 100 Nashua St., Boston, Mass.; U. S. Bureau of Public Roads, 31 St. James Ave., Boston, Mass. (See note beneath Item 3 above)

5. Preliminary materials map, Massachusetts portion of the State Line quadrangle, Massachusetts-New York, by G. William Holmes. 1 map, scale 1:24,000; 11 data sheets. Room 1, 270 Dartmouth St., Boston, Mass.; Massachusetts Dept. of Public Works, 100 Nashua St., Boston, Mass.; U. S. Bureau of Public Roads, 31 St. James Ave., Boston, Mass. (See note beneath Item 3 above)

6. Preliminary materials map, Stockbridge quadrangle, Massachusetts, by G. William Holmes. 1 map, scale 1:24,000; 7 data sheets. Room 1, 270 Dartmouth St., Boston, Mass.; Massachusetts Dept. of Public Works, 100 Nashua St., Boston, Mass.; U. S. Bureau of Public Roads, 31 St. James Ave., Boston, Mass. (See note beneath Item 3 above)

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Field and megascopic observations:

Station number 2

Location: County Berkshire Town West Stockbridge Pit ___ Active X Inactive

Road location West side of Baker Road, just south of railroad grade Coordinates 42°20'30" N. 73°23'30" W.

Geologic unit or occurrence ice contact stratified drift in kame terrace

Textural description sandy gravel Eng. Soil Type GW

Dimensions of deposit: Areal extent 2000' x 4000' Estimated thickness 10'-25'

Dimensions of pit: Areal extent 200' x 350' Exposed thickness 8'

Lithologic composition (approximate %) _____

Grain size: Maximum _____ Mean _____ Est. % of sand ___ Est. % fines ____

Rounding _____ Grading _____ Sorting _____

Soil development _____ Color _____

Oxidation or staining _____ Leaching _____

Secondary deposition _____ Reactive matter _____

Section:

Rock type	

General Description: Exposure on north wall shows sandy gravel in slump debris; otherwise pit walls are completely vegetated.

QUADRANGLE State Line

STATE Massachusetts

GEOLOGIST J. Atherton

DATE August 1963

PROJECT Mass. materials

Field and megascopic observations:

Station number 3

Location: County Berkshire Town West Stockbridge Pit X Active ___ Inactive

Road location south side of cross road Coordinates 42°21' N. 73°24'30" W.

Geologic unit or occurrence Ice-contact stratified drift: kame terrace

Textural description silt, sand, pebble gravel Eng. Soil Type GM

Dimensions of deposit: Areal extent 1000' x 5000' Estimated thickness 15-40'

Dimensions of pit: Areal extent 200' x 250' Exposed thickness 8-15'

Lithologic composition (approximate %) 60% phyllite (bedrock fragments, gravel, and till)

Grain size: Maximum 60" Mean 1" Est. % of sand 35 Est. % fines 10-15

Rounding angular, subangular, subrounded Grading medium Sorting poor

Soil development 6" A 10yr 4/4 24" B 10yr 5/8 slightly moist Color ___

Oxidation or staining ___ Leaching $CaCO_3$

Secondary deposition ___ Reactive matter ___

Section:

Rock type	

General Description: Just east of pit is till and bedrock borrow pit. Rock type is weathered phyllite (quartz veins and lenses--some pyrite). Bedrock and till here are overlain by thin (2' to 3') veneer of poorly graded cobble and boulder gravel. Materials of pit are poorly sorted, and include silt, sand, pebble gravel, and a few cobbles. Material is very compact.

QUADRANGLE State Line

STATE Massachusetts

GEOLOGIST J. Atherton

DATE August 1963

PROJECT Mass. Materials

Field and megascopic observations:

Station number 4

Location: County Berkshire Town West Stockbridge Pit X Active ___ Inactive

Road location West side of Baker Road; south of railroad grade Coordinates 42°21' N. 73°23'30" W.

Geologic unit or occurrence ice contact stratified drift in kame

Textural description sandy gravel Eng. Soil Type GW

Dimensions of deposit: Areal extent 1000' x 5000' Estimated thickness 25'

Dimensions of pit: Areal extent 50' x 75' Exposed thickness 25'

Lithologic composition (approximate %) 40% schist; 35% sandstone and siltstone

Grain size: Maximum 16" Mean .5" Est. % of sand 30 Est. % fines 10

Rounding subrounded-subangular Grading well Sorting poor

Soil development topsoil stripped Color 10yr 7/4 (C horizon)

Oxidation or staining nil Leaching ___

Secondary deposition some caliche Reactive matter $CaCO_3$

Section:

Rock type	

General Description: Pit walls badly slumped; 25' interbedded fine silty sand, poorly stratified pebble gravel and coarse sand.

4.

QUADRANGLE State Line

STATE Massachusetts

GEOLOGIST J. Atherton

DATE August 1963

PROJECT Mass. Materials

Field and megascopic observations:

Station number 5

Location: County Berkshire Town Stockbridge West Pit X Active ___ Inactive

Road location East side of Baker Road Coordinates 42°21' N. 73°23'30" W.

Geologic unit or occurrence ice contact stratified drift in kame

Textural description sandy gravel Eng. Soil Type GW

Dimensions of deposit: Areal extent 1000' x 5000' Estimated thickness 15'-40'

Dimensions of pit: Areal extent 75' x 200' Exposed thickness 25

Lithologic composition (approximate %) 40% schist; 35% sandstone and siltstone

Grain size: Maximum 4" Mean 0.5" Est. % of sand 40 Est. % fines 10

Rounding subrounded Grading well Sorting medium

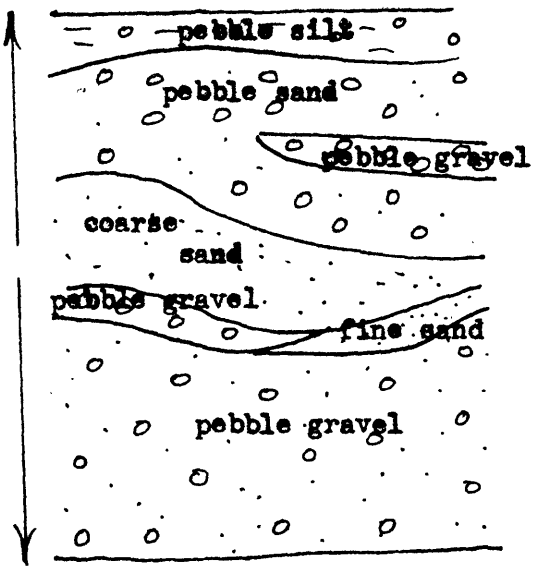
Soil development topsoil stripped Color 10yr 6/6 (C horizon)

Oxidation or staining variable fines are stained Leaching ___

Secondary deposition some caliche Reactive matter $CaCO_3$

Rock type	

Section:



General Description: 25' of poorly stratified fine pebble gravel interbedded with coarse pebble sand. Some sand and silt. Exposure on north end of pit shows pebble till or pebble silt (nonstratified).

QUADRANGLE State Line

STATE Massachusetts

GEOLOGIST J. Atherton

DATE August 1963

PROJECT Mass. Materials

Field and megascopic observations:

Station number 6

Location: County Berkshire Town West Stockbridge Pit X Active ___ Inactive

Road location SW side of Rt. 41 Coordinates 42°21' N. 73°23' W.

Geologic unit or occurrence delta

Textural description sandy gravel or fine pebble gravel Eng. Soil Type GW

Dimensions of deposit: Areal extent 1500' x 3300' Estimated thickness 50'

Dimensions of pit: Areal extent 300' x 800' Exposed thickness 30'

Lithologic composition (approximate %) ___

Grain size: Maximum 7" Mean 0.5" Est. % of sand 25-30 Est. % fines 0-2

Rounding rounded subrounded Grading well graded Sorting sorted

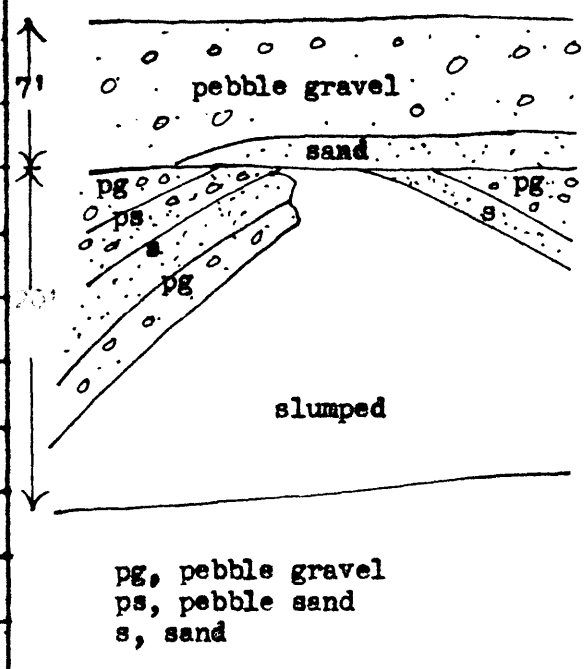
Soil development 6" A 24-32" B Color ___

Oxidation or staining very little Leaching ___

Secondary deposition ___ Reactive matter $CaCO_3$

Rock type	Percent
Quartzite	6
sandstone, conglomerate	26
Limestone, dolostone, marble	7
Gneiss	
Phyllites, schists	28
Igneous	
Quartz	26
Miscellaneous	7

Section:



General Description: East end of pit active. 30' of well-defined deltaic structure. Topsets: poorly stratified, well-graded pebble gravel; foresets; well stratified, interbedded fine pebble gravel, very coarse pebble sand, and medium to coarse sand.

QUADRANGLE State Line

STATE Massachusetts

GEOLOGIST G. W. Holmes

DATE September 1963

PROJECT Mass. Material

Field and megascopic observations:

Station number 7

Location: County Berkshire Town West Stockbridge Pit X Active ___ Inactive

Road location SW side of Rt. 41 Coordinates 42°21' N. 73°23' W.

Geologic unit or occurrence outwash

Textural description pebble gravel Eng. Soil Type GW

Dimensions of deposit: Areal extent 1500' x 3300' Estimated thickness 50'

Dimensions of pit: Areal extent 300' x 300' Exposed thickness 30'

Lithologic composition (approximate %) ___

Grain size: Maximum 4" Mean 0.5" Est. % of sand 25 Est. % fines 9-12

Rounding subrounded Grading well Sorting poor

Soil development 6"-12" A ploughed 10yr 4/4 10"-15" B 10yr 6/6 Color ___

Oxidation or staining some Fe_2O_3 stain on pebbles Leaching ___

Secondary deposition some caliche Reactive matter $CaCO_3$

Section:

Rock type	Percent
Quartzite	10
sandstone, conglomerate	23
Limestone, dolostone, marble	11
Gneiss	
Schists	33
Igneous mafic / felsic	
Quartz	20
Miscellaneous	3

General Description: Only the east end of pit is active. West end of pit has been graded and loamed as part of housing development (recreational). 20' of interbedded fine and medium pebble gravel and fine sand, sandy gravel, silty gravel, and pebble silt. Well stratified.

QUADRANGLE State Line

STATE Massachusetts

GEOLOGIST G. W. Holmes

DATE September 1963

PROJECT Mass. Materials

Field and megascopic observations:

Station number 8

Location: County Berkshire Town Richmond Pit ___ Active X Inactive

Road location on town line (Richmond-West Stockbridge) 200' east of rt. 41. Coordinates 42°21'30" N. 73°23" W.

Geologic unit or occurrence ice contact stratified drift as kame

Textural description pebble gravel Eng. Soil Type GW

Dimensions of deposit: Areal extent 600' x 1400' Estimated thickness 15'-40'

Dimensions of pit: Areal extent see general description Exposed thickness 35'

Lithologic composition (approximate %) ___

Grain size: Maximum 72" Mean 0.75" Est. % of sand 30 Est. % fines 6-8

Rounding subrounded Grading well graded Sorting poor

Soil development 5" A 10yr 5/3, 12" B 10yr 6/6 Color 10yr 7/4 C horizon

Oxidation or staining ___ Leaching ___

Secondary deposition ___ Reactive matter $CaCO_3$

Section:

Rock type	Percent
Quartzite	15
sandstone, conglomerate	12
Gneiss	
Schists	55
Limestone, dolostone, marble	10
Igneous mafic / felsic	
Quartz	5
Miscellaneous	3

limonite-goethite

General Description: 3 small pits, each about 30' x 60'. A few boulders litter the surface of deposit and floor of pits. Boulder rock types include limestone-dolostone, calcareous siltstone and sandstone, grey-green arkose, and amphibolite.

Pit walls are badly slumped. Debris everywhere shows pebble gravel or sandy pebble gravel.

QUADRANGLE State Line

STATE Massachusetts

GEOLOGIST G. W. Holmes

DATE September 1963

PROJECT Mass. Materi

Estimated Engineering Characteristics of Major Deposits
of Unexploited Construction Materials

Geologist G. William Holmes Date November 1963 Project Mass. Materials

Location: Quadrangle State Line State Mass.-N. Y. Town Great Barrington

Identifying symbol · A Lat 42°15' N. Long 73°23' W.

Road coordinates On Plain Road, south of Harts Pond

Accessibility On main and secondary roads

Geologic unit Outwash

Topography Nearly flat terrace

Water supply Adjacent to Williams River and Harts Pond

Estimated texture Pebble-cobble gravel

Dimensions: Areal extent 1800 x 2200' Estimated thickness 20'

Present land use Residential and pasture

Local abundance of similar materials Not abundant, except in the quadrangle to the south

General description:
Evenly-bedded, clean, moderately well-sorted gravel

Evaluation: Suitability, and potential utilization.
A large supply of good quality clean gravel, accessible and near a moderately clean water supply. Land use restricts the practical exploitation of this deposit.

40765-64

Estimated Engineering Characteristics of Major Deposits of Unexploited Construction Materials

Geologist G. William Holmes Date November 1963 Project Mass. Materials

Location: Quadrangle State Line State Mass.-N. Y. Town Great Barrington West Stockbridge

Identifying symbol B Lat 42°15' N. Long 73°23' W.

Road coordinates Near intersection of Pixley and Plain Roads

Accessibility On main and secondary roads

Geologic unit Ice-contact stratified drift; kame terrace

Topography Slightly rolling pitted terrace

Water supply Williams River and Harts Pond

Estimated texture Pebble-cobble gravel

Dimensions: Areal extent 900 x 2500' Estimated thickness 20'

Present land use Agriculture and residential

Local abundance of similar materials Not generally abundant in this area

General description:

Unevenly bedded, well-graded clean sand and gravel, probably with some collapse structures.

Evaluation: Suitability, and potential utilization.

Large supply of well-graded construction materials. Land use restricts its exploitation.

40765-64

Estimated Engineering Characteristics of Major Deposits of Unexploited Construction Materials

Geologist G. William Holmes Date November 1963 Project Mass. Materials

Location: Quadrangle State Line State Mass.-N. Y. Town West Stockbridge

Identifying symbol C Lat 42°18' N. Long 73°23' W.

Road coordinates On secondary road near intersection with Gt. Barrington Road

Accessibility On road and railroad

Geologic unit Ice-channel deposit, and ice-contact stratified drift: kame terrace

Topography Slightly rolling pitted terrace, and long narrow ridge

Water supply Adjacent to Williams River

Estimated texture Pebble-cobble gravel

Dimensions: Areal extent 1400x2400' Estimated thickness 30-40'

Present land use Agriculture and residential

Local abundance of similar materials No large supplies in immediate area

General description:

Well-graded, unevenly bedded clean sand and gravel probably with some collapse structures.

Evaluation: Suitability, and potential utilization.

Very large supply of good quality gravel and sand, easily recovered, accessible to rail line and roads, and to a good supply of water. Only a part of the deposit is occupied by dwellings and small farms.

40765-64