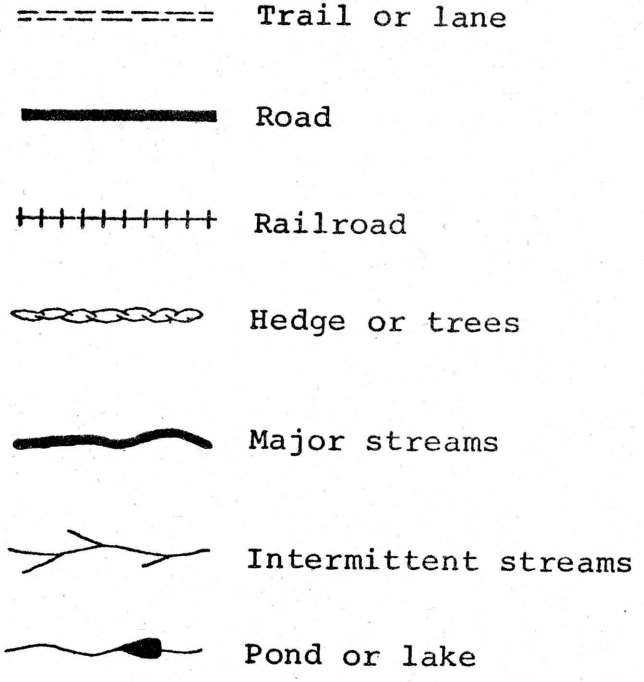
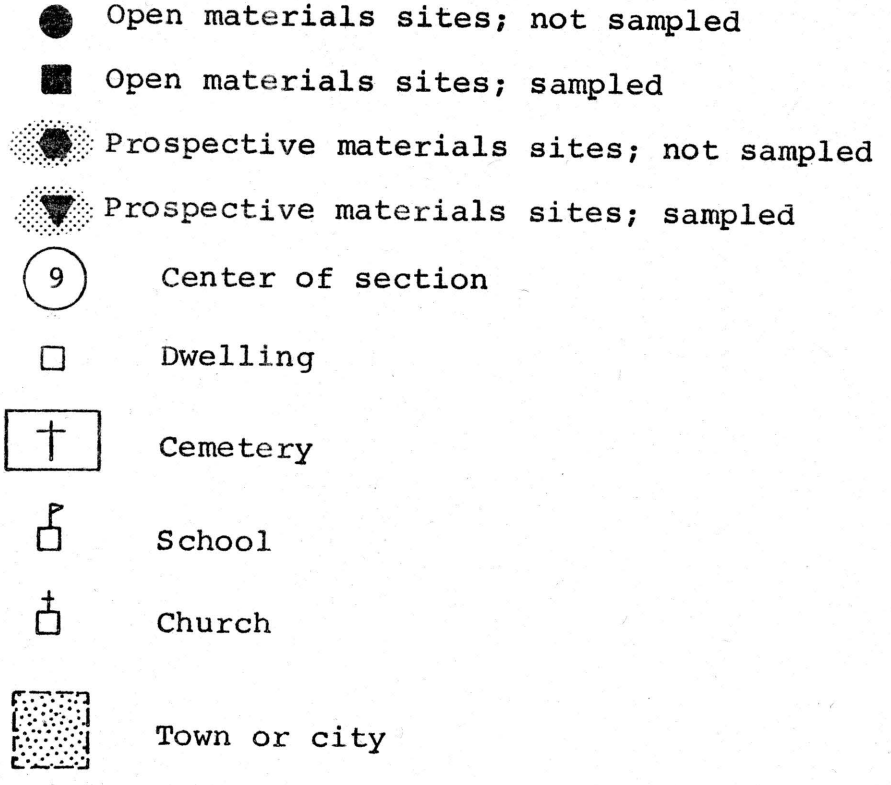
OPEN MATERIALS SITES; NOT SAMPLED

LEGEND





STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. $\frac{LS+1}{\mathbb{P}dc}$ Date January, 1968

Material Limestone County Jefferson

Location SW¼ Sec. 4 Twp. 9S Range 18E

Owner See Remarks
name address

Nature of Deposit Dry Accessibility Fair Site Located on Plate I

Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To Material produced at site $\frac{LS+10}{\mathbb{P}dc}$

Specific Gravity (Sat.) (Dry)

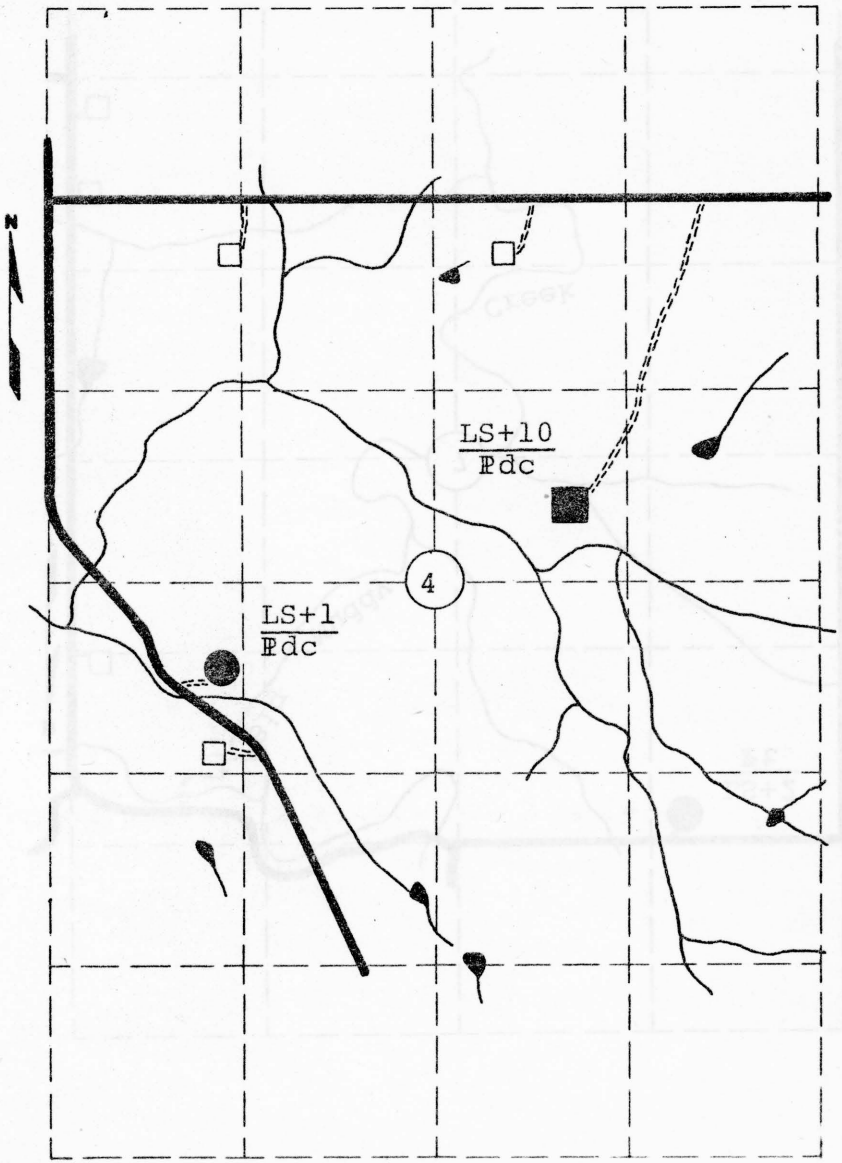
Los Angeles Wear

Absorption Soundness

Wt. Cu.Ft. Str. Ratio

Remarks Stella Leckron, 600 NW 4th St., Abilene, Kansas

Frank Madden, 600 NW 4th St., Abilene, Kansas



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+2 / Pt Date January, 1968

Material Limestone County Jefferson

Location NE¼ Sec. 7 Twp. 11S Range 17E

Owner William E. Scherk (name), 3300 Huntoon, Topeka, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate V

Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Topeka Formation

Material Similar To Material produced at site LS+19 / Pt

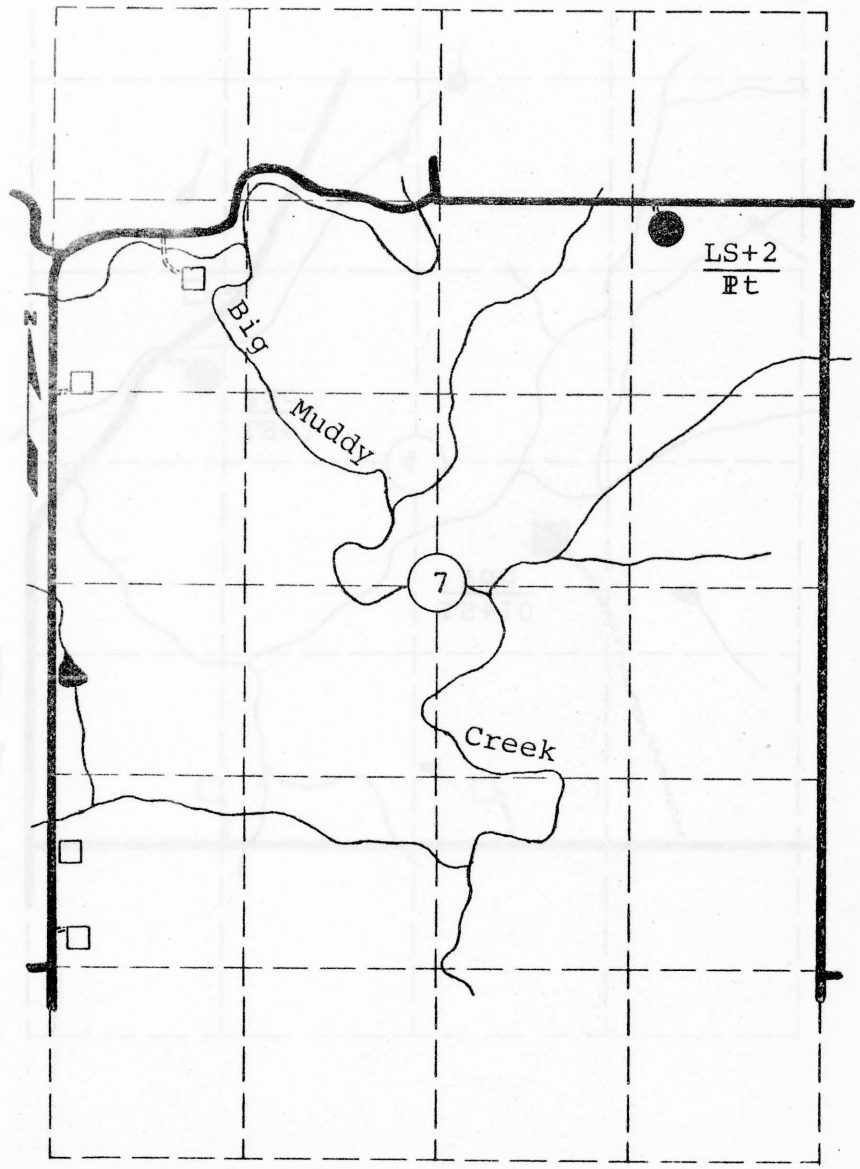
Specific Gravity (Sat.) _____ (Dry) _____

Los Angeles Wear _____

Absorption _____ Soundness _____

Wt. Cu.Ft. _____ Str. Ratio _____

Remarks _____



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+3 / ℙdc Date January, 1968

Material Limestone County Jefferson

Location SE¼ Sec. 3 Twp. 11S Range 18E

Owner Herman Richter (name) Oskaloosa, Kansas (address)

Nature of Deposit Dry Accessibility Fair Site Located on Plate V

Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ozawkie Member

Material Similar To

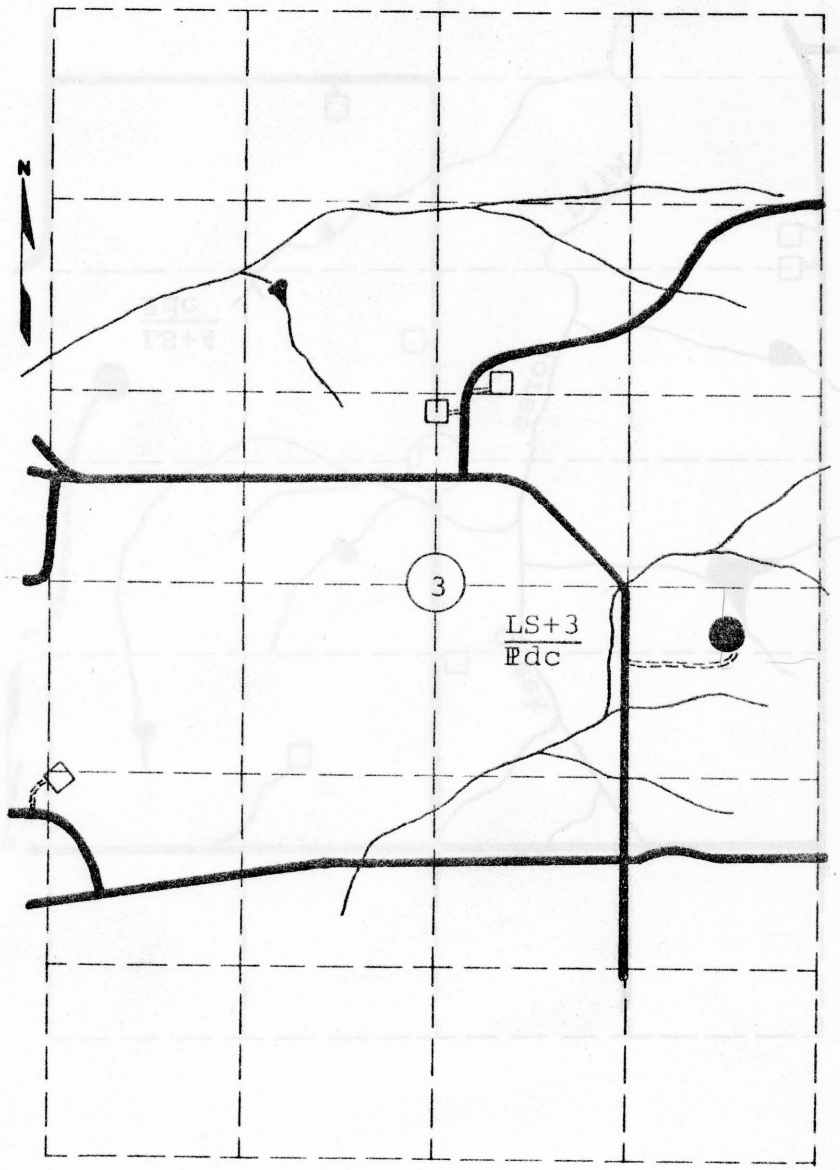
Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+4 / Pdc Date January, 1968

Material Limestone County Jefferson

Location SW¼ Sec. 11 Twp. 11S Range 18E

Owner George Seetin (name) Perry, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ozawkie Member

Material Similar To

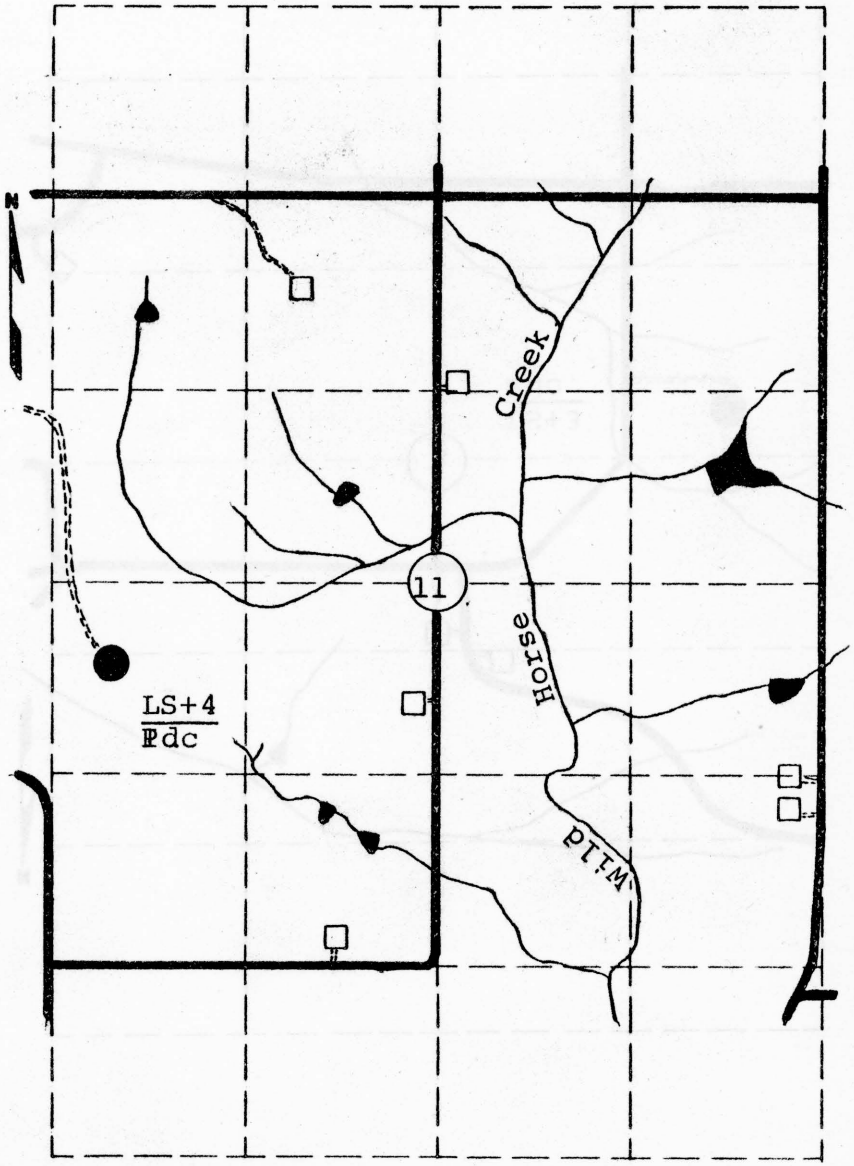
Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+5 / Po Date January, 1968

Material Limestone County Jefferson

Location NW¼ Sec. 30 Twp. 11S Range 19E

Owner Hobart & Lottie Stallard (name) Perry, Kansas (address)

Nature of Deposit Dry Accessibility Fair Site Located on Plate VI

Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Oread Formation, Plattsmouth Member

Material Similar To Material produced from site LS+26 / Po

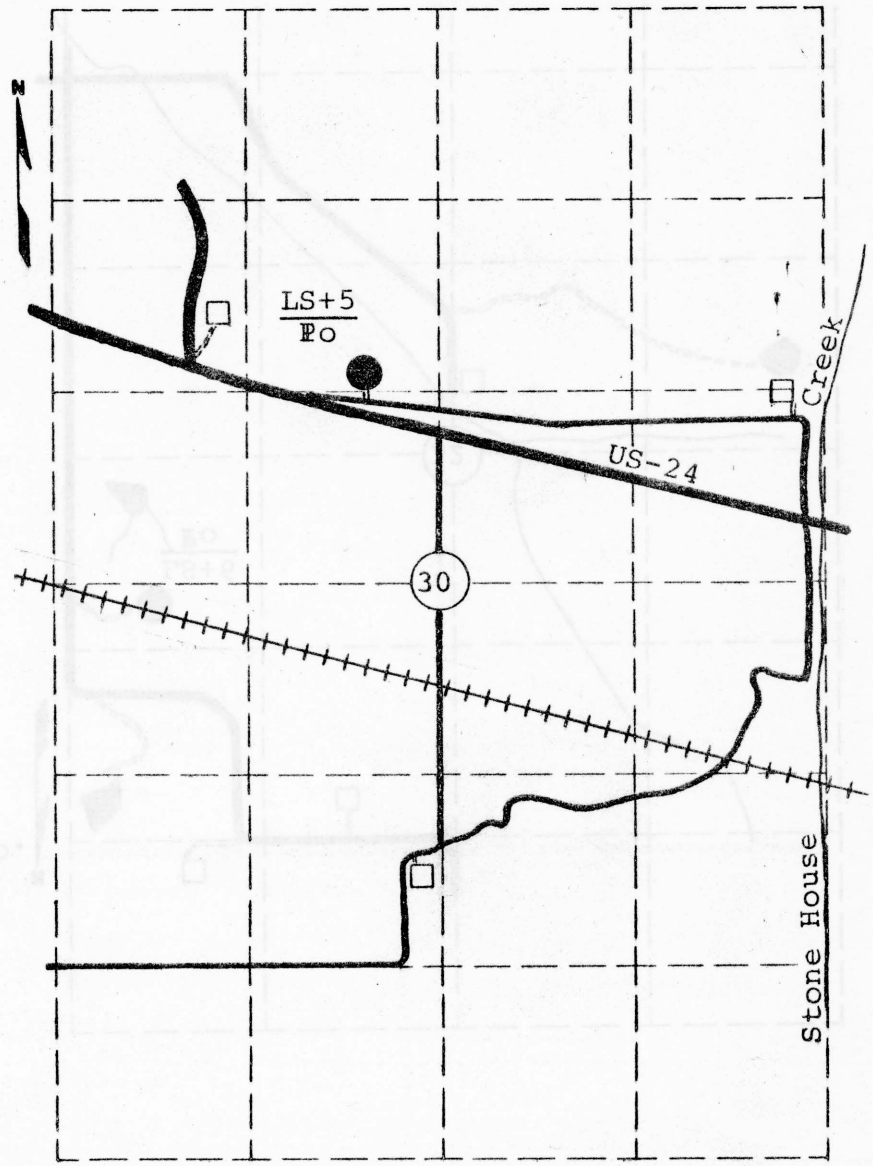
Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+6 / Po Date January, 1968

Material Limestone County Jefferson

Location NW¼ Sec. 32 Twp. 11S Range 20E

Owner Anna L. Throckmorton (name), 5412 E. 16th, Kansas City, Mo. (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Oread Formation, Plattsmouth Member

Material Similar To Material produced at site LS+29 / Po

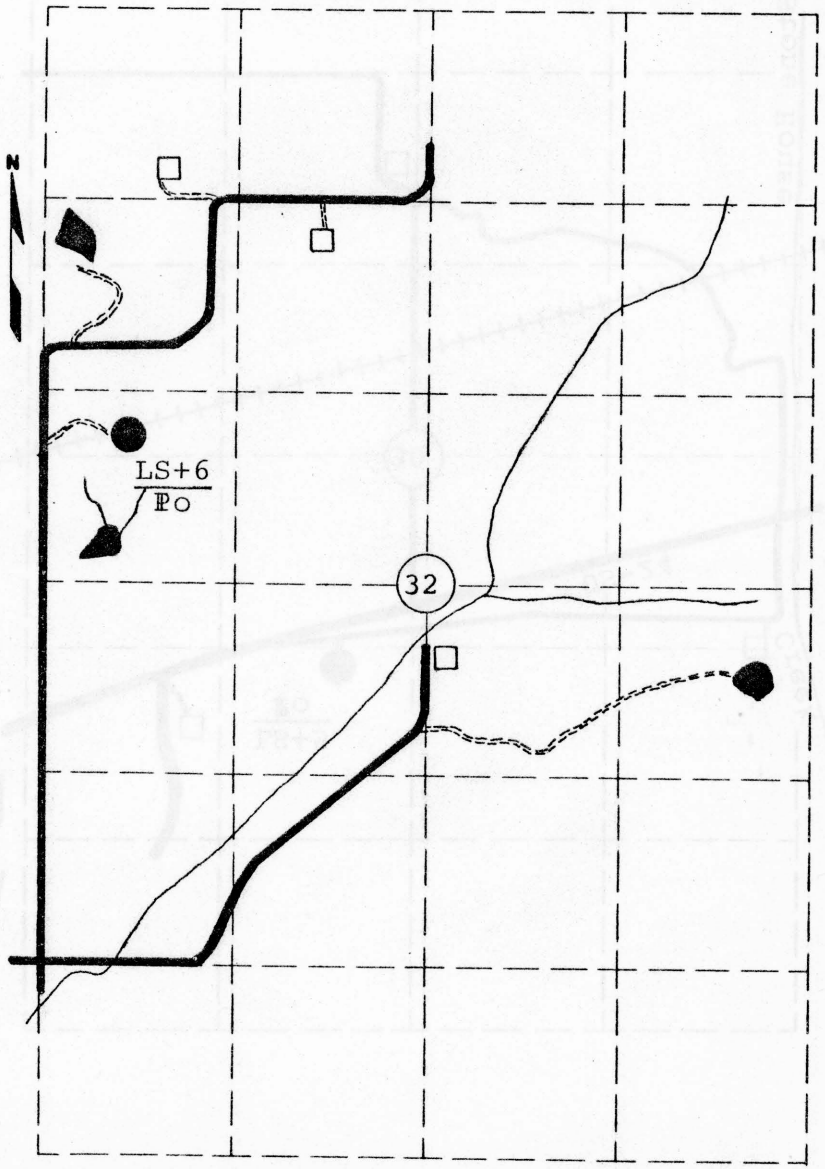
Specific Gravity (Sat.) _____ (Dry) _____

Los Angeles Wear _____

Absorption _____ Soundness _____

Wt. Cu.Ft. _____ Str. Ratio _____

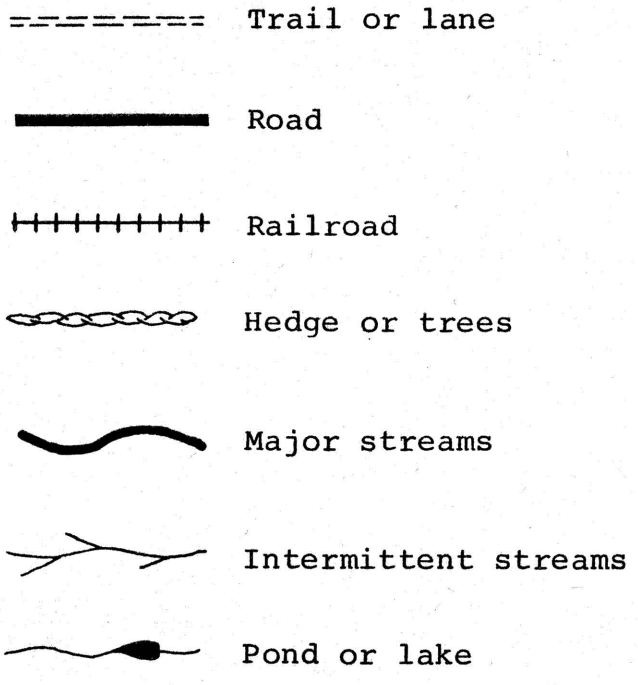
Remarks _____

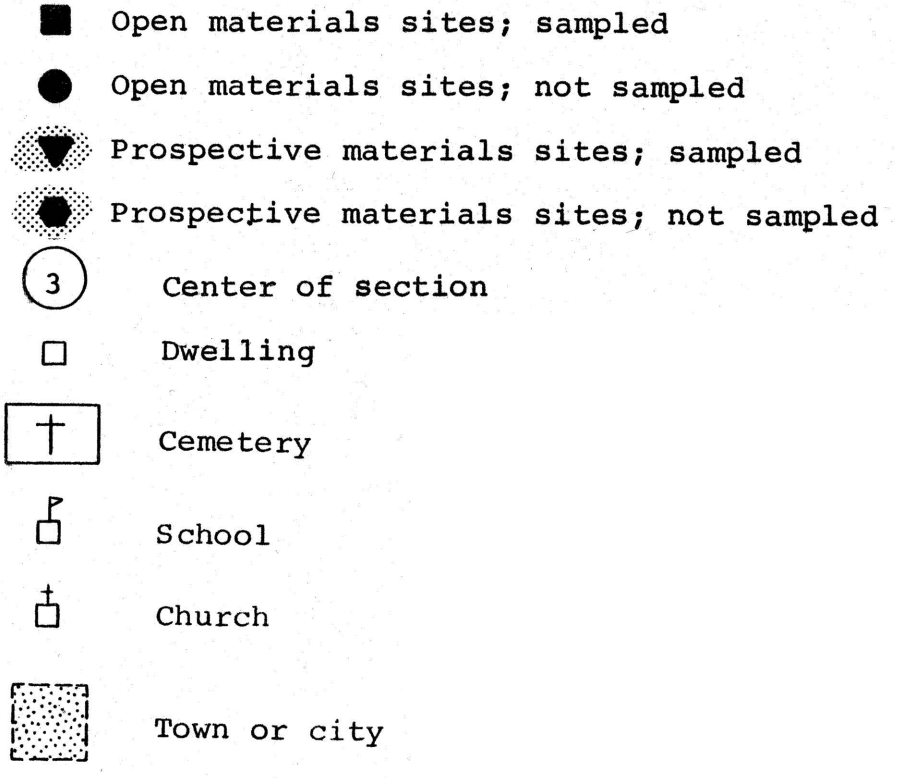


Scale: 1" = ¼ Mile

OPEN MATERIALS SITES; SAMPLED

LEGEND





STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+7 / Pdc Date January, 1968

Material Limestone County Jefferson

Location NW¼ Sec. 20 Twp. 8S Range 18E

Owner Alice Baker (name) Valley Falls, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate I

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-16

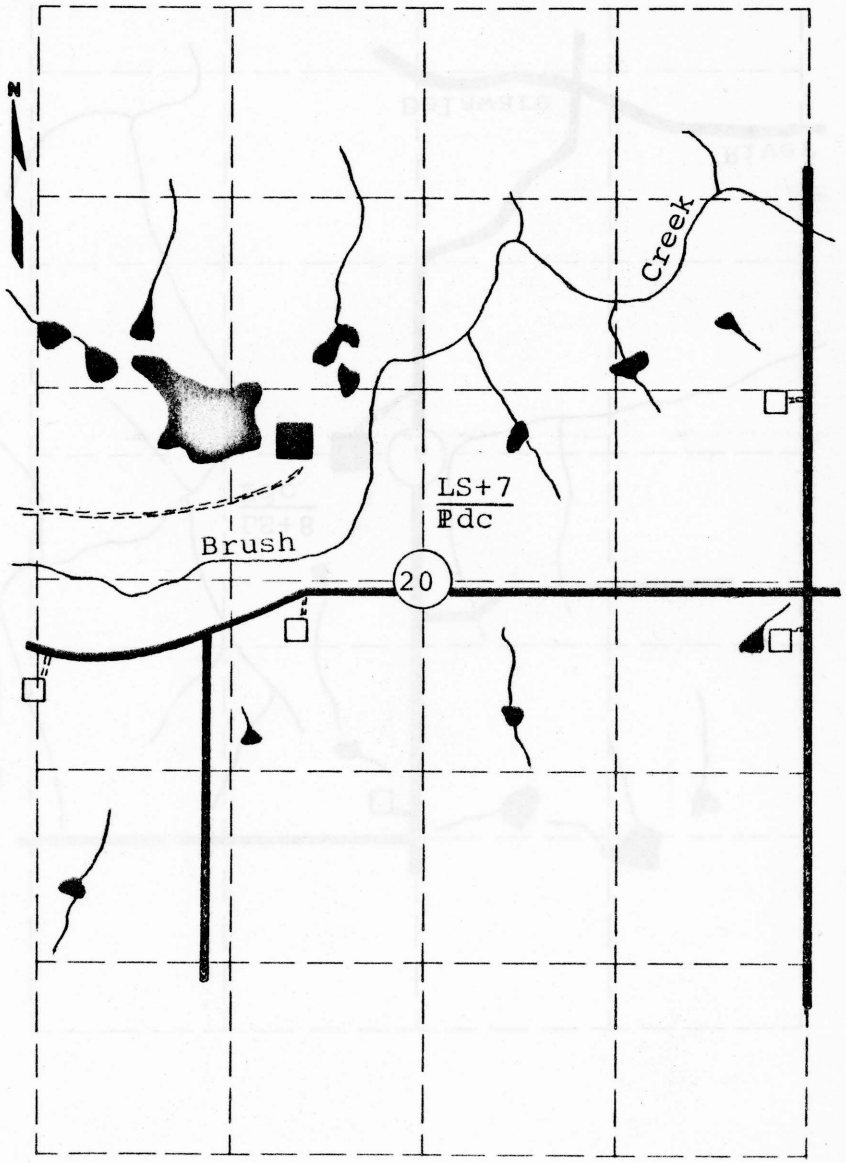
Specific Gravity (Sat.) 2.59 (Dry) 2.49

Los Angeles Wear (B) 31.7

Absorption 3.64 Soundness 0.88

Wt. Cu.Ft. ____ Str. Ratio ____

Remarks Ledge 12'
20' to 40' Overburden



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+8 / Pdc Date January, 1968

Material Limestone County Jefferson

Location SE¼NW¼, NE¼SW¼ Sec. 6 Twp. 9S Range 18E

Owner Richard C. Kyle (name) Valley Falls, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate I

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Overburden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-26

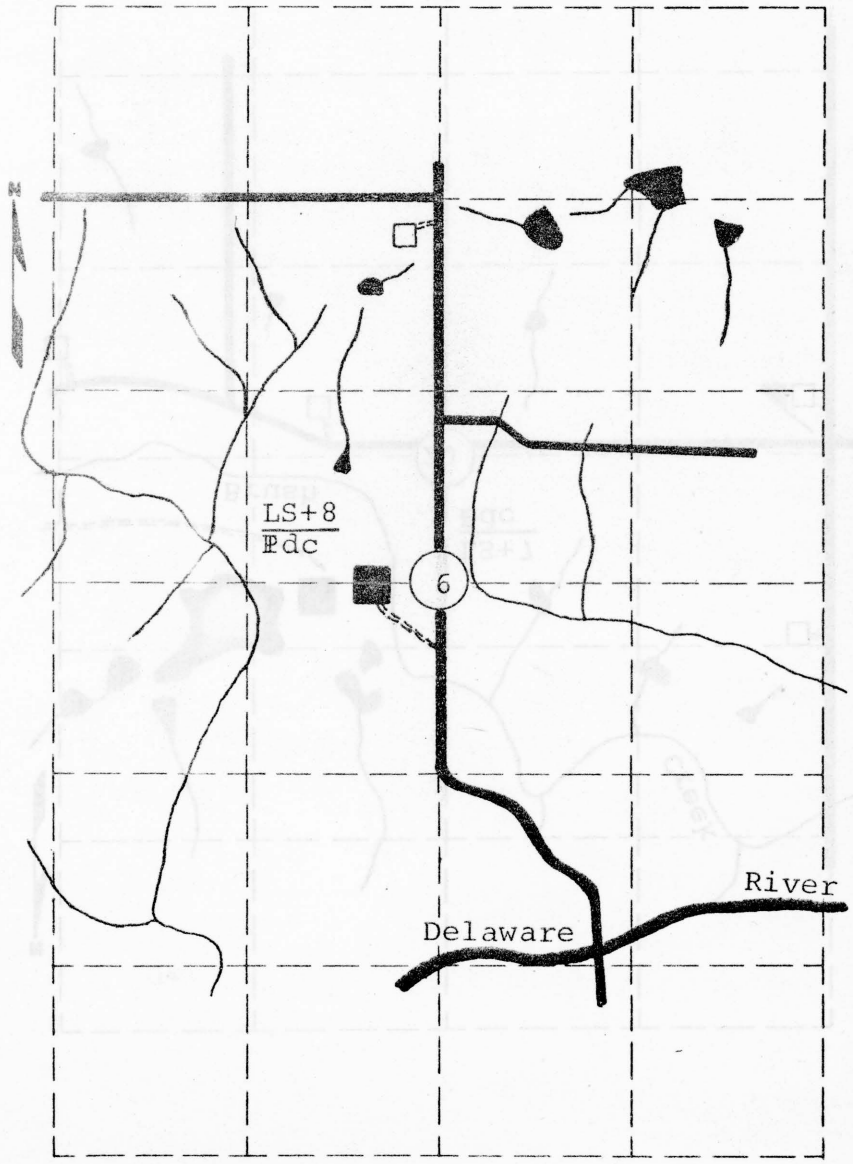
Specific Gravity (Sat.) 2.56, 2.55, 2.52, 2.55 (Dry) 2.49, 2.49, 2.43, 2.48

Los Angeles Wear (B) 28.9

Absorption 2.70, 2.68, 3.64, 2.78 Soundness 0.97

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+9 / Pdc Date January, 1968

Material Limestone County Jefferson

Location NE¼ NE¼ Sec. 5 Twp. 9S Range 18E

Owner John R. Gutschenritter (name), 2145 3rd St., Sabetha, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate I

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-12

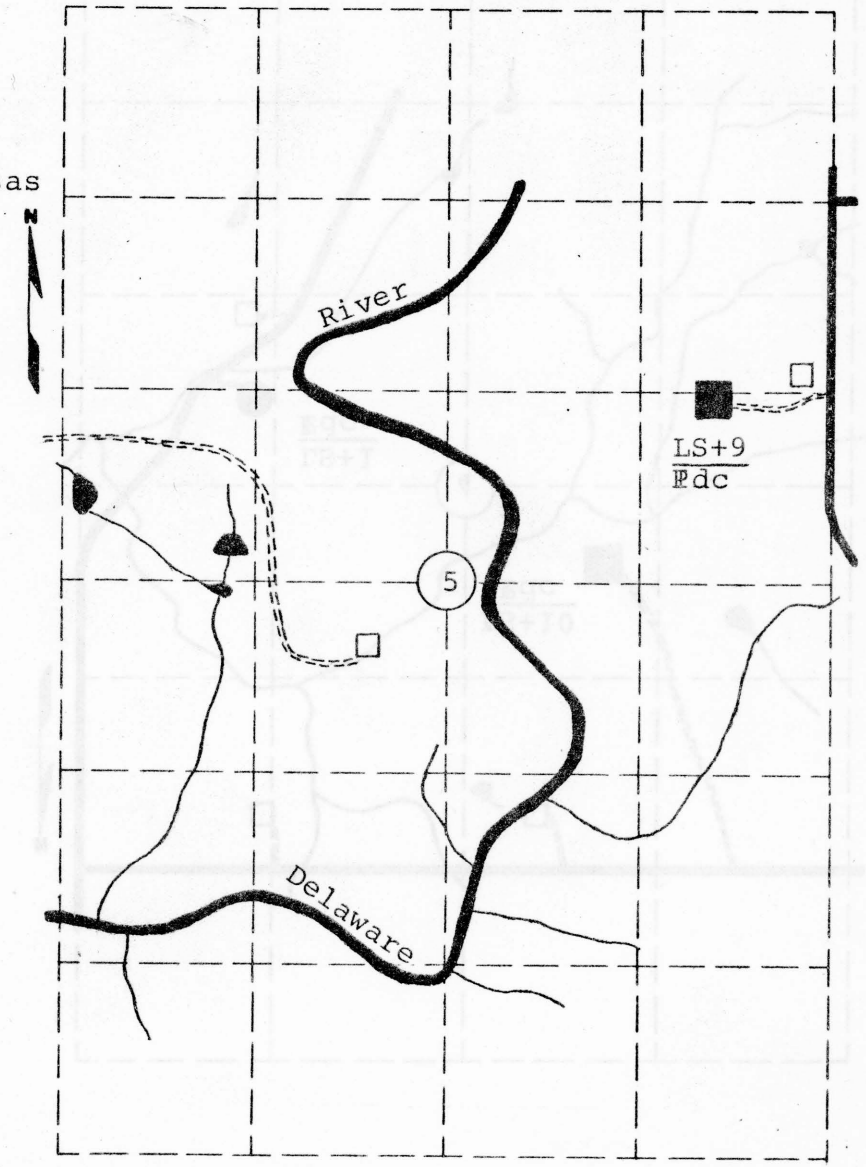
Specific Gravity (Sat.) 2.50, 2.51, 2.55 (Dry)

Los Angeles Wear 34.4, 36.3, 30.3(B)

Absorption 2.94 Soundness 0.98, 0.97, 0.92

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+10 / Pdc Date January, 1968

Material Limestone County Jefferson

Location NE¼ Sec. 4 Twp. 9S Range 18E

Owner Wallace E. McClenny (name) Valley Falls, Kansas (address)

Nature of Deposit Dry Accessibility Fair Site Located on Plate I

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained								Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100					

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-31

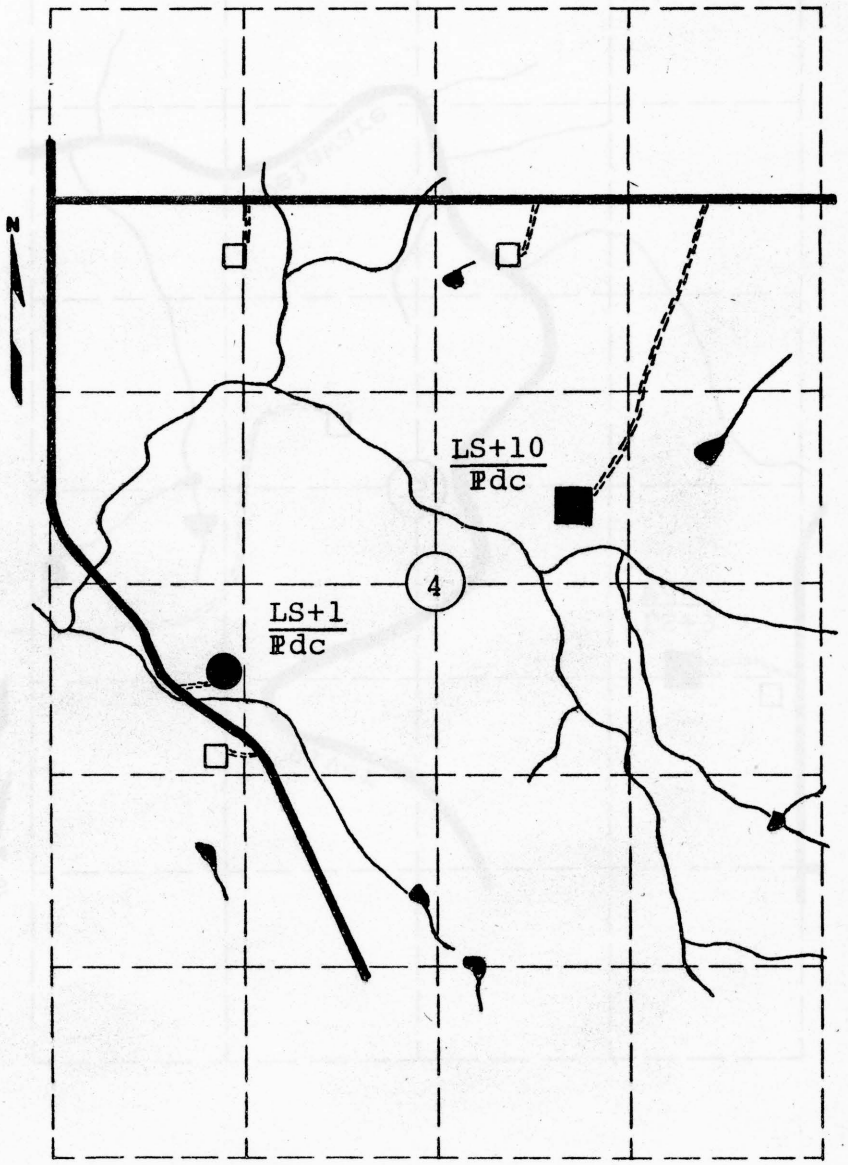
Specific Gravity (Sat.) 2.52, 2.52 (Dry) 2.43, 2.43

Los Angeles Wear 34.4

Absorption 3.62, 3.64 Soundness 0.94

Wt. Cu.Ft. ____ Str. Ratio ____

Remarks ____



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+11 / Pdc Date January, 1968

Material Limestone County Jefferson

Location SW¼ Sec. 32 Twp. 7S Range 20E

Owner Henry A. Schrick (name), R. R. 3, Atchison, Kansas (address)

Nature of Deposit Dry Accessibility Fair Site Located on Plate II

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-13

Specific Gravity (Sat.) See Remarks I (Dry) See Remarks II

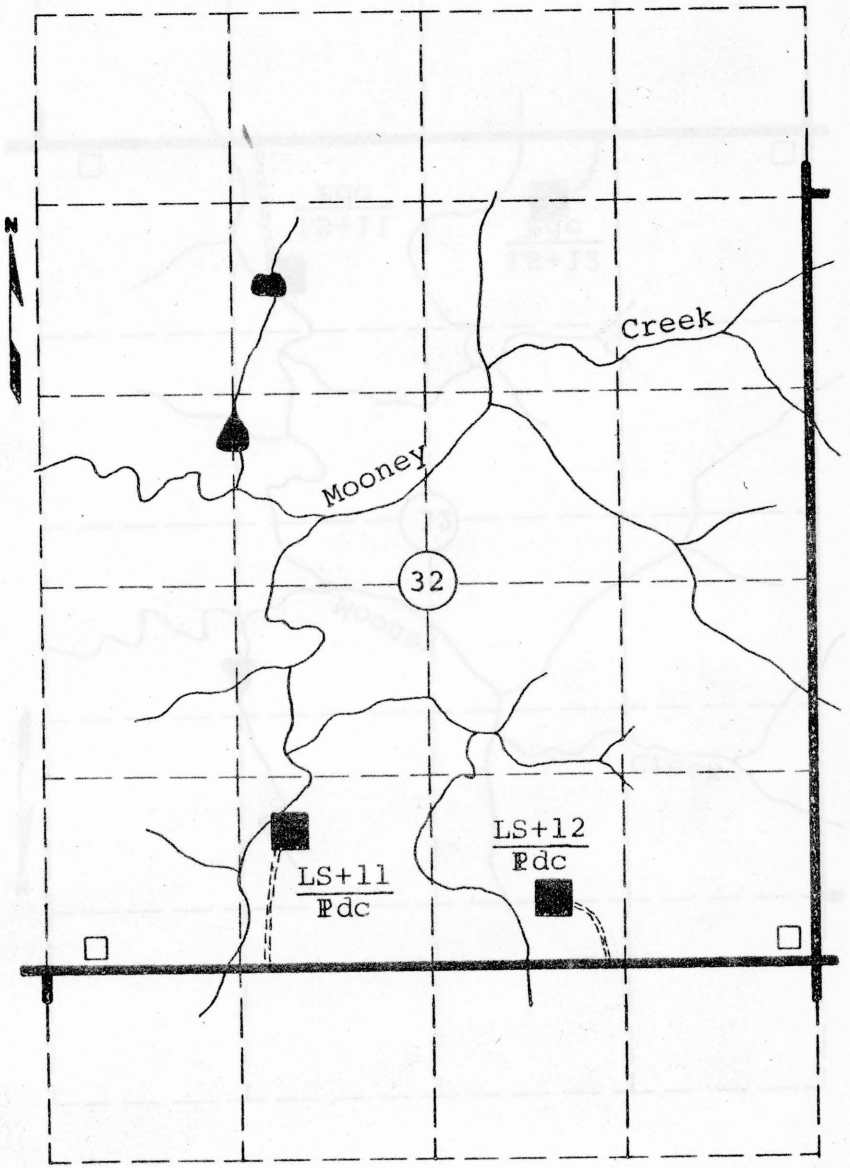
Los Angeles Wear (B) 38.9

Absorption See Remarks III Soundness 0.86

Wt. Cu.Ft. Str. Ratio

Remarks I. (A) 2.47, (B) 2.48, (C) 2.48

II. (A) 2.35, (B) 2.37, (C) 2.36 III. (A) 5.36, (B) 4.93 (C) 4.94



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+12 / Pdc Date January, 1968

Material Limestone County Jefferson

Location SE¼ Sec. 32 Twp. 7S Range 20E

Owner Eugene Domann (name) Valley Falls, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate II

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-28

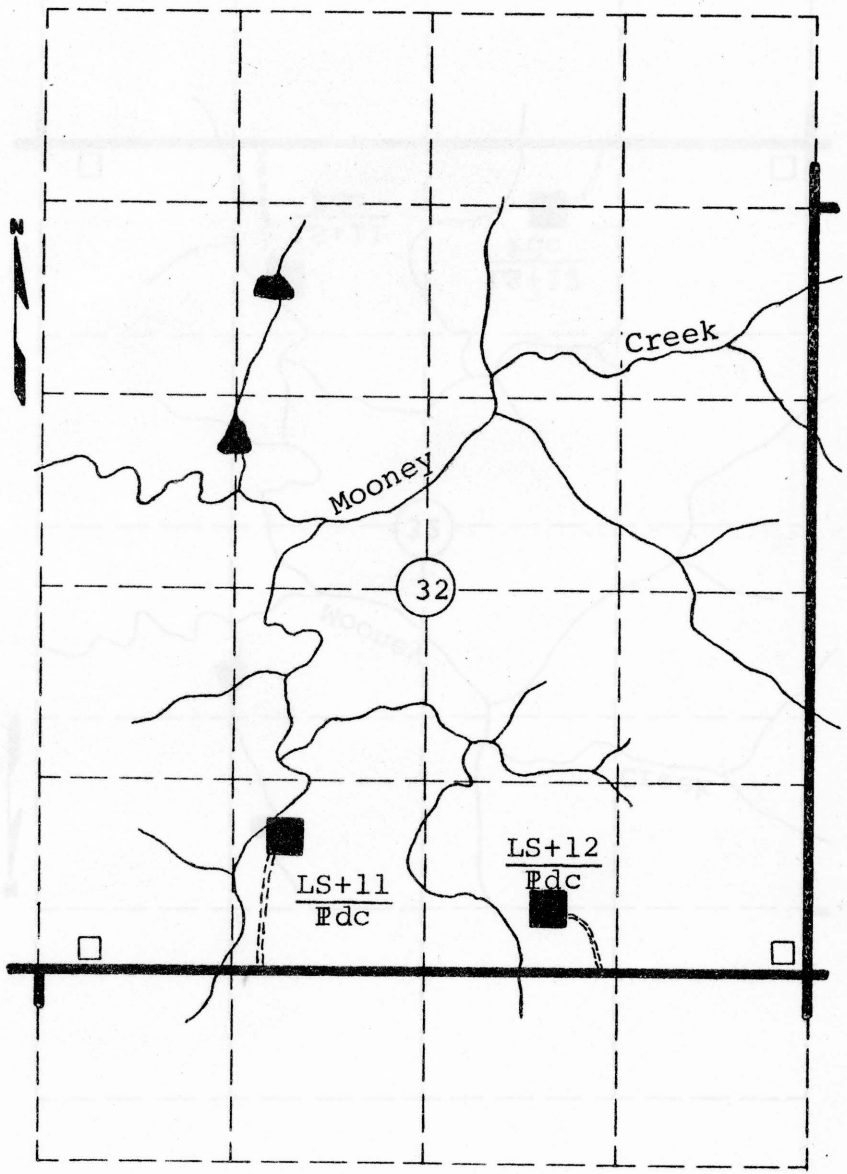
Specific Gravity (Sat.) 2.52 - 2.53 (Dry) 2.42 - 2.43

Los Angeles Wear (B) 31.1 (B) 29.9

Absorption 4.25 - 3.96 Soundness 0.89 - 0.85

Mt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+13 / Pdc Date January, 1968

Material Limestone County Jefferson

Location SW¼ Sec. 1 Twp. 9S Range 19E

Owner Durland L. Wallace (name) Winchester, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate II

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-21

Specific Gravity (Sat.) See Remarks I (Dry) See Remarks II

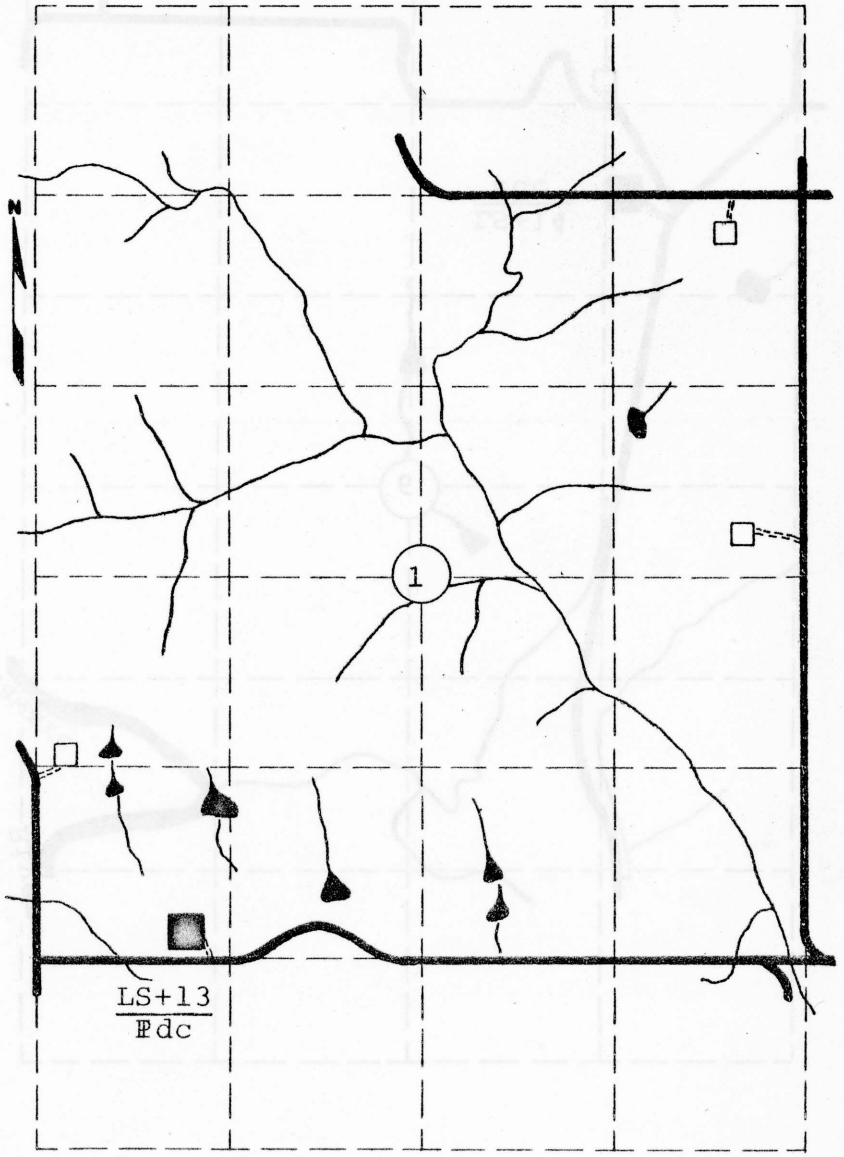
Los Angeles Wear 36.5

Absorption See Remarks III Soundness 0.94

Wt. Cu.Ft. Str. Ratio

Remarks I. 2.43,2.44,2.44,2.44,2.44 II. 2.31,2.32,2.33, 2.33, 2.31 III. 5.17,5.10,4.86,4.78,5.34

9' Ledge 3' - 5' Overburden



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+14 / Pdc Date January, 1968

Material Limestone County Jefferson

Location SE¼ Sec. 6 Twp. 10S Range 18E

Owner William C. Leech (name) Oskaloosa, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate III

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-14

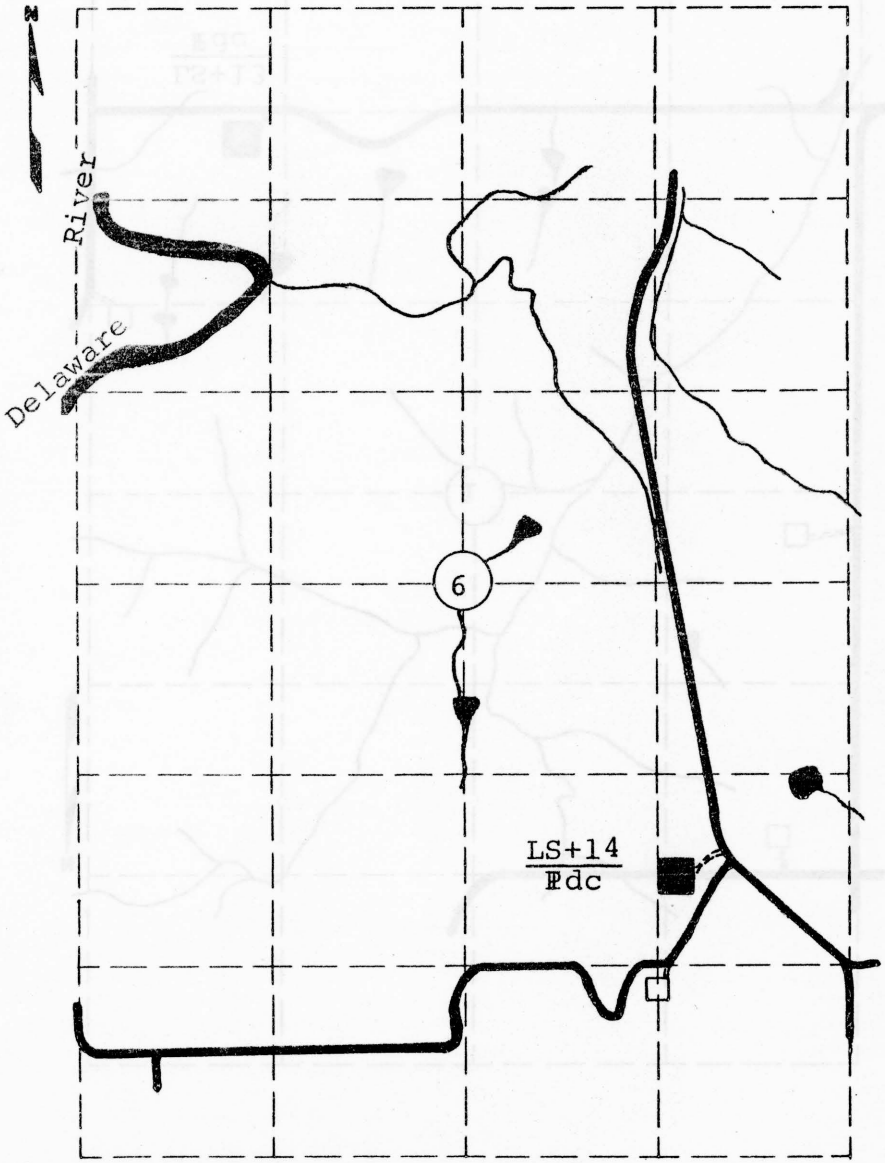
Specific Gravity (Sat.) 2.58 (Dry)

Los Angeles Wear (B) 30.9

Absorption 2.50 Soundness 0.95

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+15 / Pt Date January, 1968

Material Limestone County Jefferson

Location SW¼ Sec. 22 Twp. 9S Range 17E

Owner Orley Bowen (name) Ozawkie, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate III

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Topeka Formation

Material Similar To SHC Form 619 No. 44-27

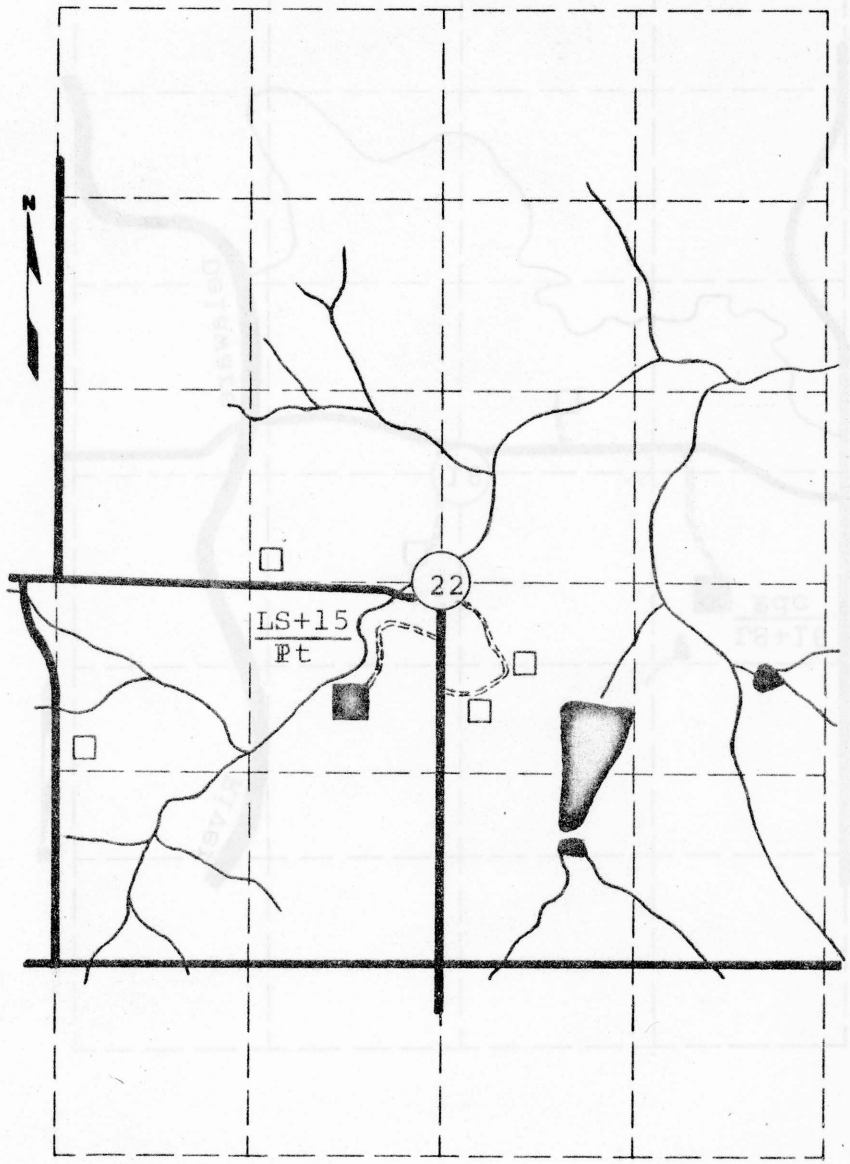
Specific Gravity (Sat.) 2.61,2.58,2.60 (Dry) 2.53,2.48,2.50

Los Angeles Wear 28.6,(B)33.2,(B)32.8

Absorption 3.33,4.28,4.01 Soundness 0.90,0.85,0.91

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+16 / Pdc Date January, 1968

Material Limestone County Jefferson

Location NE¼ Sec. 18 Twp. 10S Range 18E

Owner Taken by Government for Perry Dam (name / address)

Nature of Deposit Dry Accessibility Good Site Located on Plate III

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. JF. Co. #2

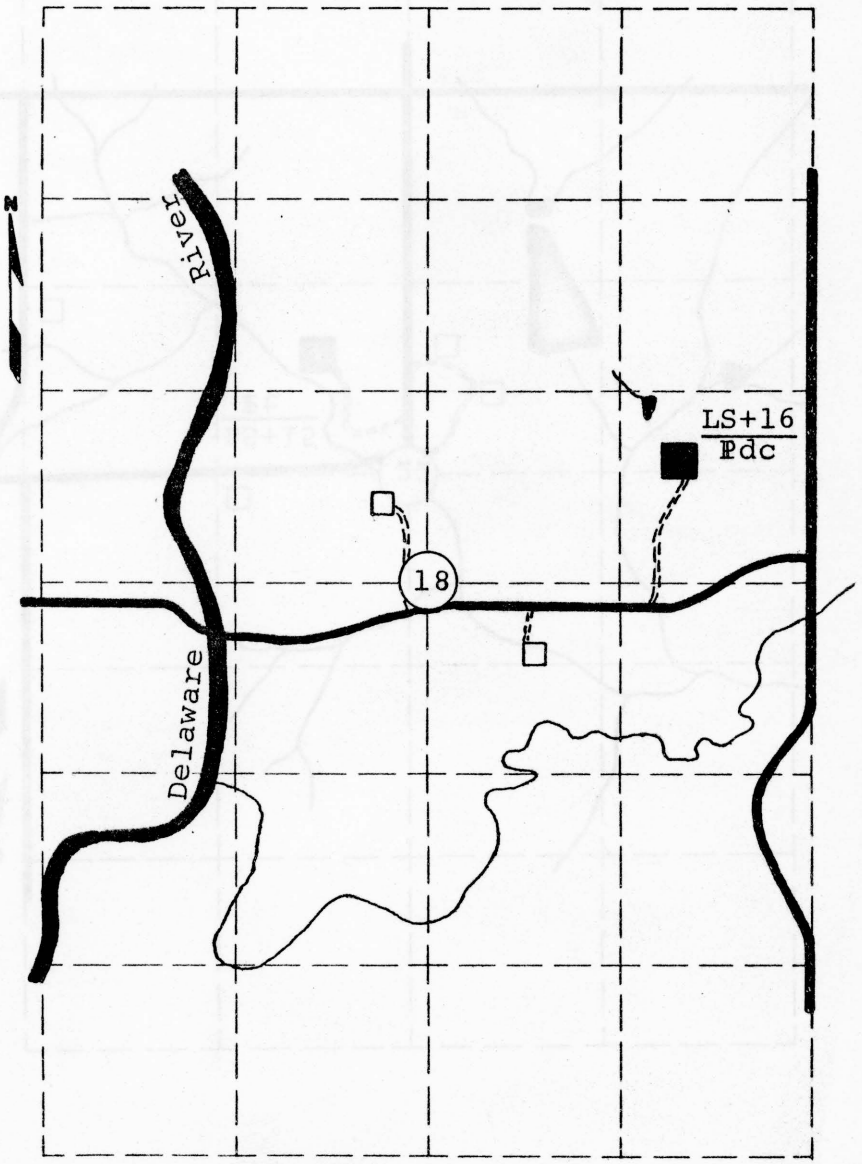
Specific Gravity (Sat.) 2.58, 2.46 (Dry)

Los Angeles Wear (A)29.1, (A)49.8

Absorption 1.61, 3.81 Soundness 0.96, 0.95

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+17 / Pdc Date January, 1968

Material Limestone County Jefferson

Location SW¼ Sec. 24 Twp. 9S Range 18E

Owner Fred H. Newell (name) Oskaloosa, Kansas (address)

Nature of Deposit Dry Accessibility Poor Site Located on Plate IV

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-23

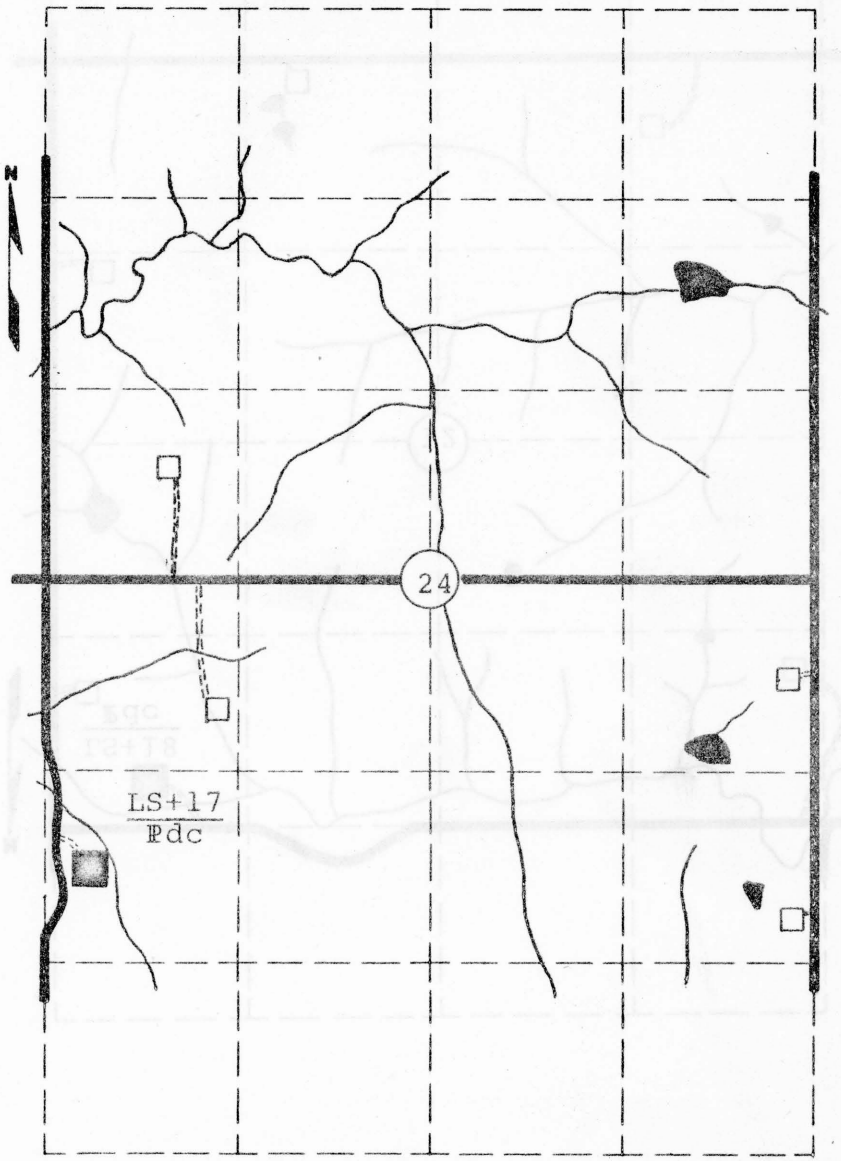
Specific Gravity (Sat.) 2.45 (Dry) 2.33

Los Angeles Wear 36.7

Absorption 5.31 Soundness 0.91

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+18 / Pdc Date January, 1968

Material Limestone County Jefferson

Location NW¼ Sec. 12 Twp. 9S Range 19E

Owner Robert P. Broddle (name) Winchester, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate IV

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-17

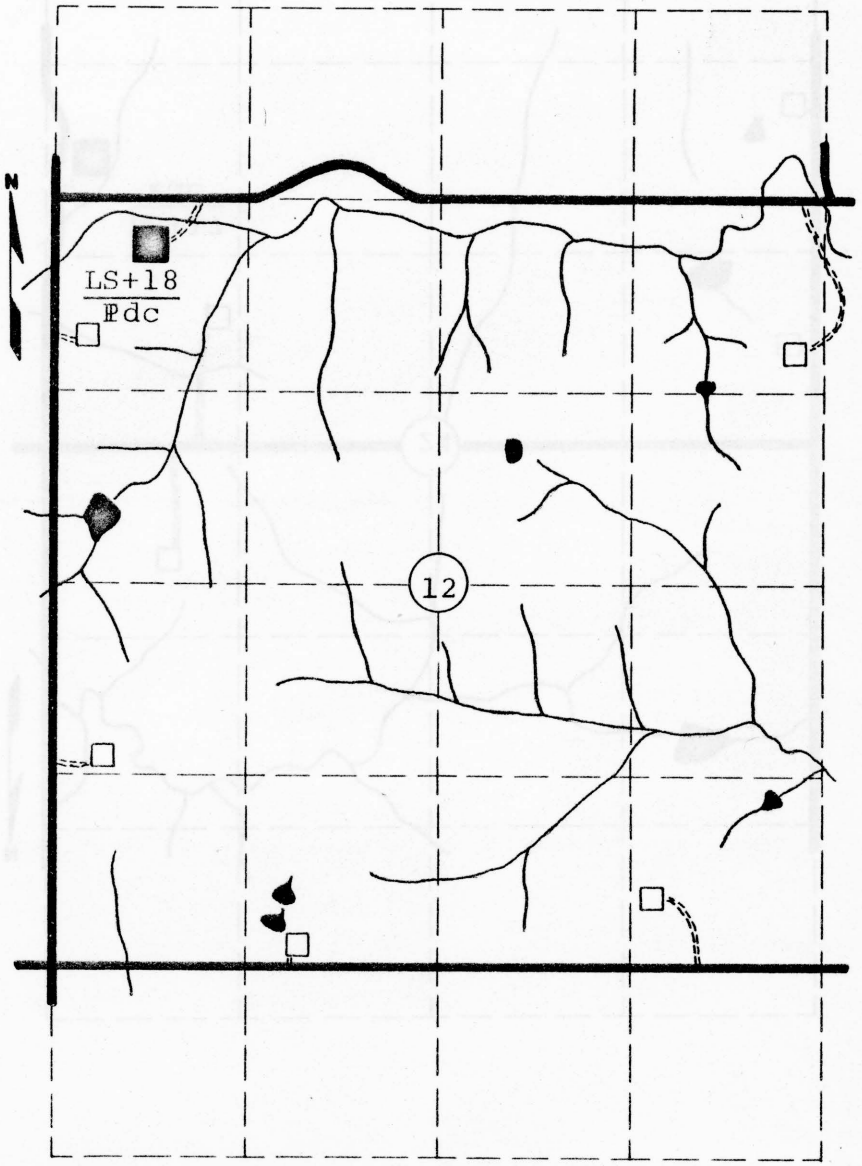
Specific Gravity (Sat.) 2.43 (Dry)

Los Angeles Wear (A) 32.6

Absorption 3.98 Soundness 0.94

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

09

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+19 / Pt Date January, 1968

Material Limestone County Jefferson

Location NE¼ Sec. 25 Twp. 10S Range 16E

Owner See Remarks (name / address)

Nature of Deposit Dry Accessibility Good Site Located on Plate V

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Over-Burden	Depth of Material	Percent Retained 1 1/2	3/4	3/8	4	8	16	30	50	100	Wash 200	G.F.	L.L.	P.I.

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Topeka Formation

Material Similar To SHC Form 619 No. 44-32

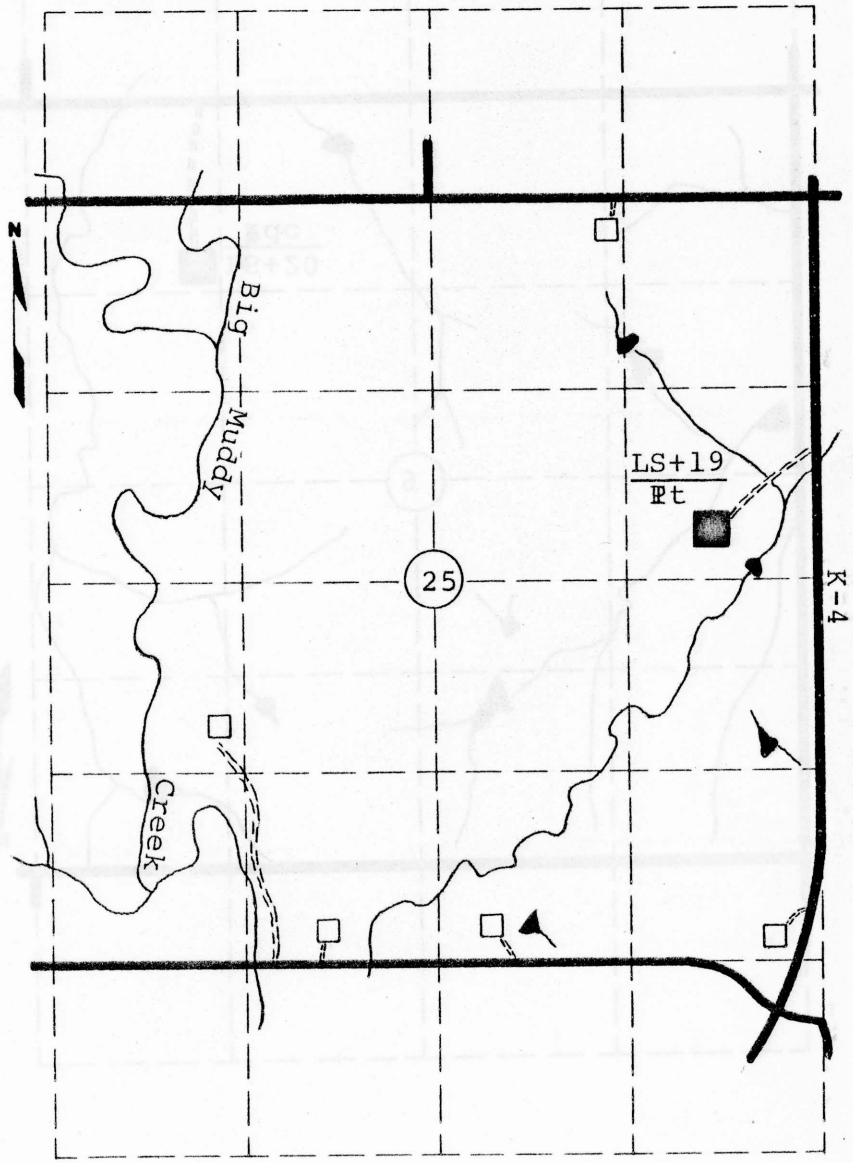
Specitic Gravity (Sat.) 2.61, 2.62, 2.62 (Dry) 2.53, 2.54, 2.53

Los Angeles Wear 27.0, 35.6, 33.4

Absorption 3.21, 3.11, 3.70 Soundness 0.91

Wt. Cu.Ft. Str. Ratio

Remarks Agusta & Clarence Howell, 643 Webster
Topeka, Kansas



Scale: 1" = ¼ Mile

61

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+20 / Pdc Date January, 1968

Material Limestone County Jefferson

Location SW¼ SW¼ Sec. 9 Twp. 11S Range 17E

Owner Emil J. DeWilde (name), R. R. 3, Topeka, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate V

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-22

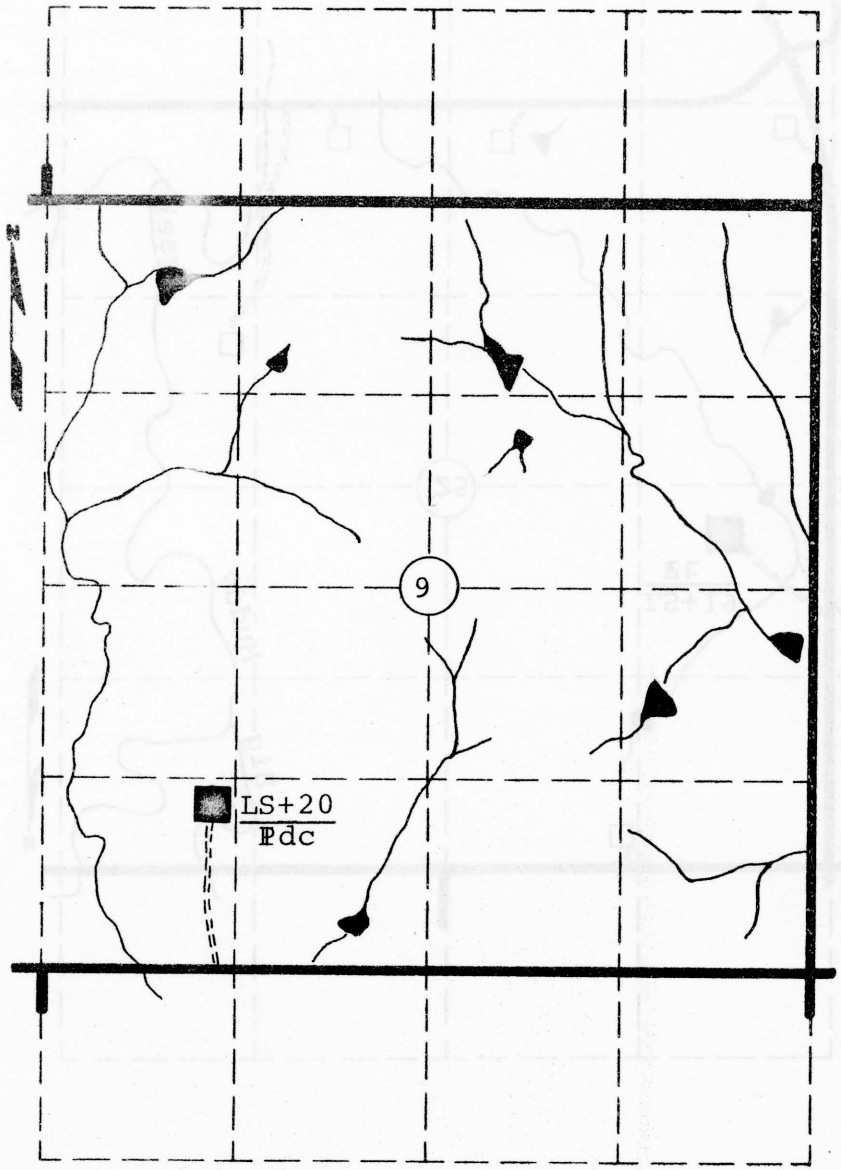
Specific Gravity (Sat.) 2.56 (Dry) 2.49

Los Angeles Wear 30.9

Absorption 3.17 Soundness 0.93

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+21 / Pdc Date January, 1968

Material Limestone County Jefferson

Location SE¼ Sec. 16 Twp. 11S Range 17E

Owner N. R. Hamm (name) Perry, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate V

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. 44-18

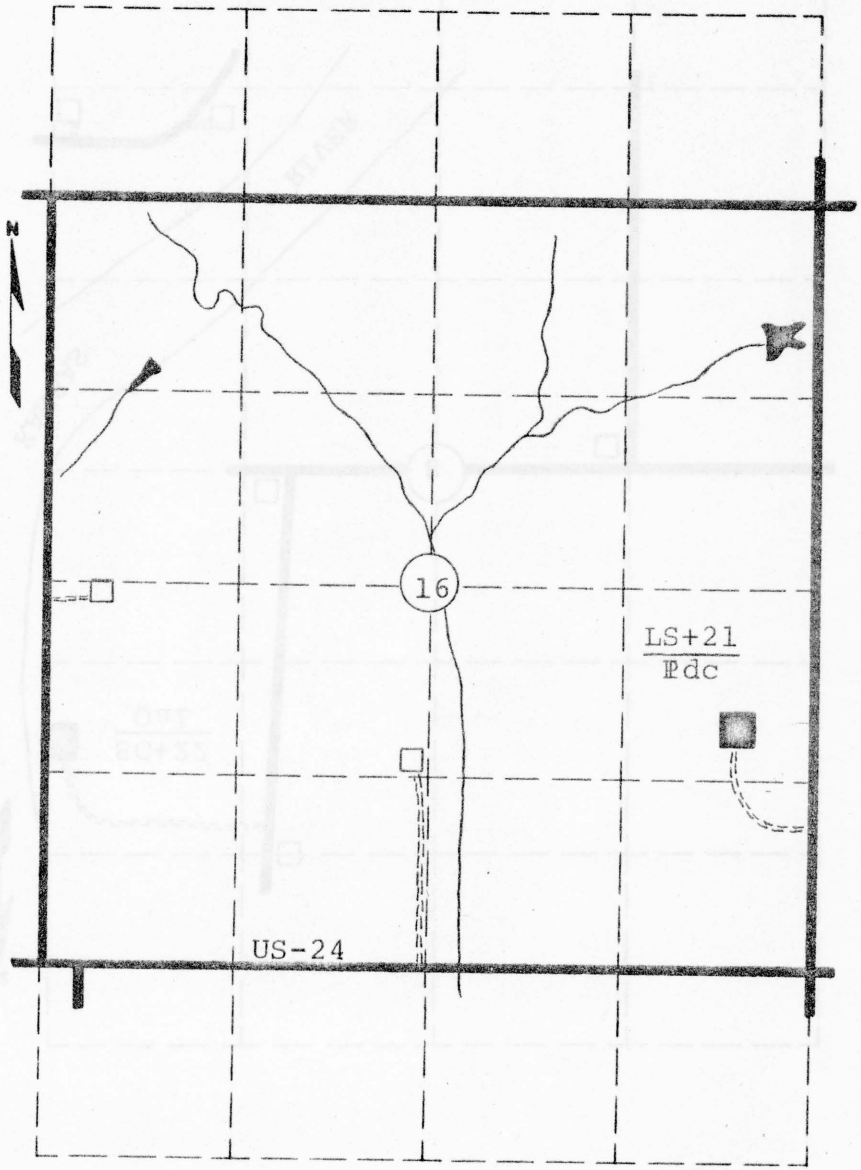
Specitic Gravity (Sat.) 2.56, 2.62 (Dry)

Los Angeles Wear 30.9(A) 26.3(B)

Absorption 2.84, 2.22 Soundness 0.97, 0.94

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. SG+22 / Qal Date January, 1968

Material Sand and Gravel County Jefferson

Location NW¼ of Survey No. 8 Twp. 11S Range 16E

Owner C. L. Bigham (name) Grantville, Kansas (address)

Nature of Deposit Wet Accessibility Good Site Located on Plate V

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				
					1	3	9	30	65	90	98	99	1.40	3.95		

CORRELATION DATA

Geological Age Quaternary

Geological Source Alluvium

Material Similar To SHC Form 619 No. 44-19

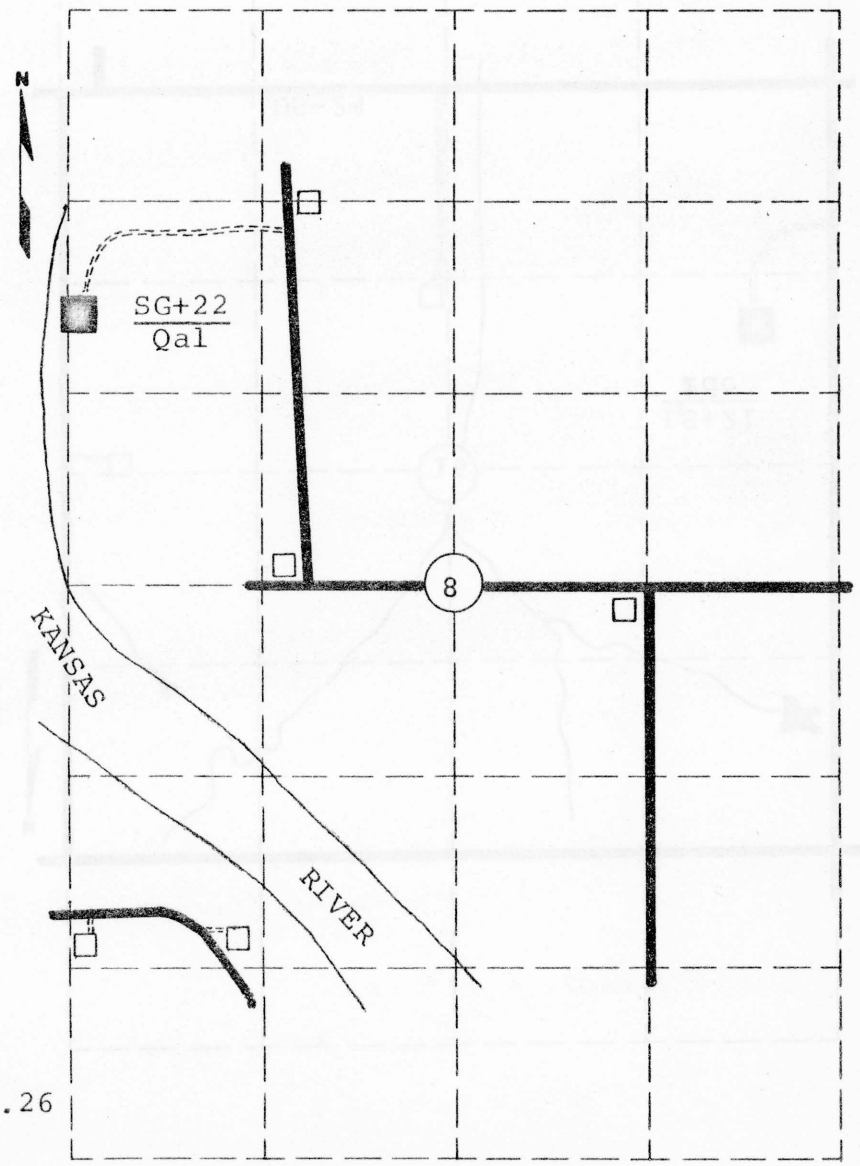
Specific Gravity (Sat.) 2.62 (Dry)

Los Angeles Wear 36.9

Absorption 0.7 Soundness 0.98

Wt. Cu.Ft. 110.01 Str. Ratio 1-day 1.44, 3-day, 1.26

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. SG+23 / Qal Date January, 1968

Material Sand and Gravel County Jefferson

Location SE¼ of Survey No. 17 Twp. 11S Range 18E

Owner Isabelle Baker, (name) Ozawkie, Kansas (address)

Nature of Deposit Wet Accessibility Good Site Located on Plate V

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Quaternary

Geological Source Alluvium

Material Similar To SHC Form 619 No. 44-29

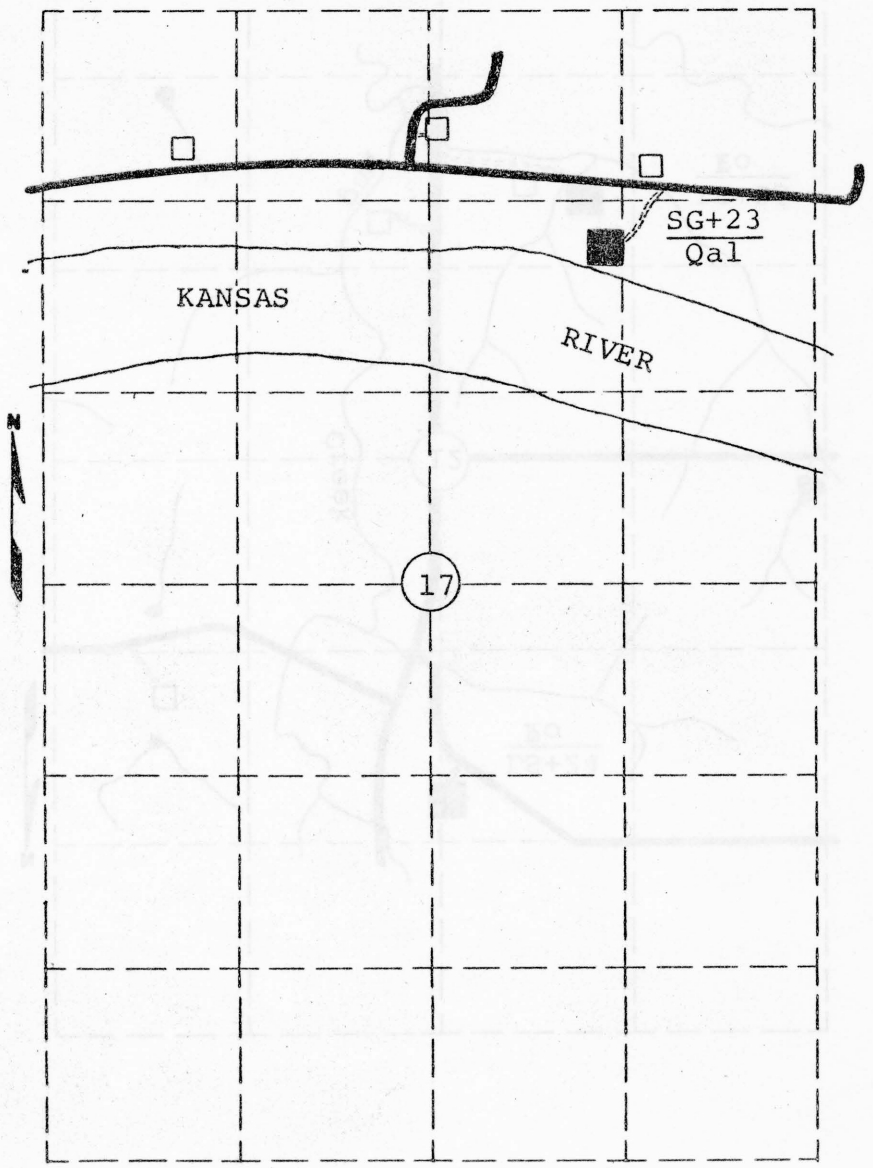
Specific Gravity (Sat.) 2.61 (Dry)

Los Angeles Wear

Absorption 0.30 Soundness

Wt. Cu.Ft. 111.71 Str. Ratio 1-day 1.22, 3-day 1.30

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+24 / Po Date January, 1968

Material Limestone County Jefferson

Location NW¼ NE¼ Sec. 12 Twp. 11S Range 19E

Owner Floyd Harmon etux. (name) McClouth, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained 1 1/2	3/4	3/8	4	8	16	30	50	100	Wash 200	G.F.	L.L.	P.I.

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Oread Formation, Plattsmouth Member

Material Similar To SHC Form 619 No. JF. Co. #5

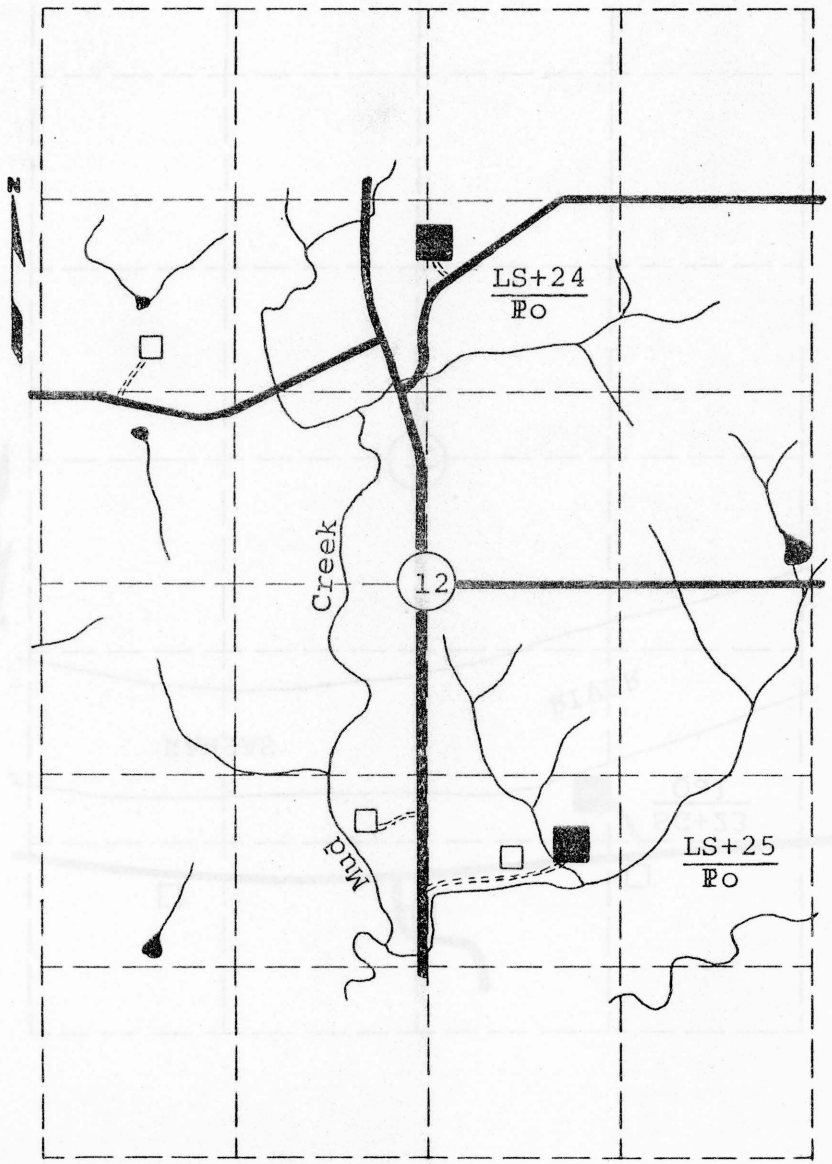
Specific Gravity (Sat.) 2.57, 2.60, 2.43, 2.52 (Dry)

Los Angeles Wear (A) 32.0, (A) 30.4, (A) 37.1, (A) 34.2

Absorption 2.57, 1.67, 4.42, 2.55 Soundness 0.73, 0.93, 0.96, 0.90

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+25 / Po Date January, 1968

Material Limestone County Jefferson

Location W½ SE¼ Sec. 12 Twp. 11S Range 19E

Owner J. W. Beerbower (name) R. R. 3, Lawrence, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Oread Formation, Plattsmouth Member

Material Similar To SHC Form 619 No. 44-3

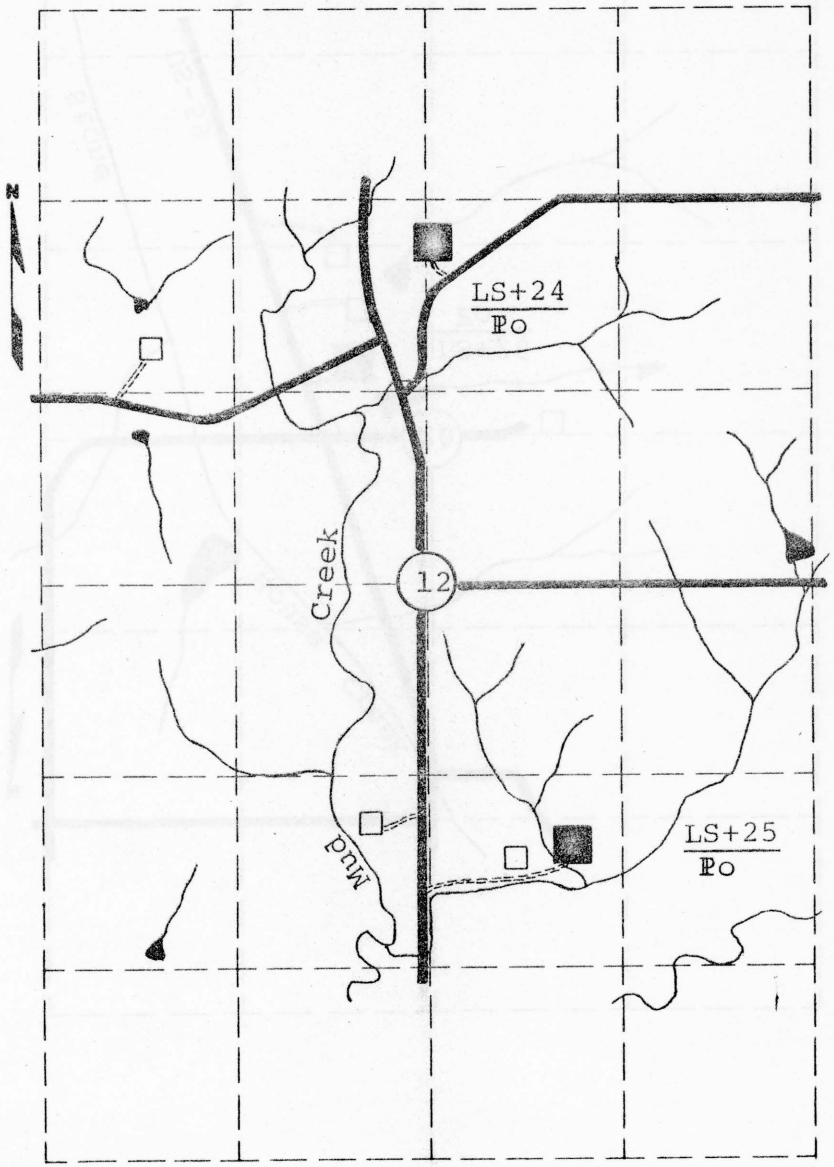
Specitic Gravity (Sat.) 2.48, 2.55 (Dry)

Los Angeles Wear (A)38.0, (A)28.7

Absorption 3.12 - 2.87 Soundness 0.98 - 0.92

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+26 / Po Date January, 1968

Material Limestone County Jefferson

Location NE¼ SW¼ Sec. 20 Twp. 11S Range 19E

Owner G. D. Duree (name) Williamstown, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Oread Formation, Plattsmouth Member

Material Similar To SHC Form 619 No. 44-1

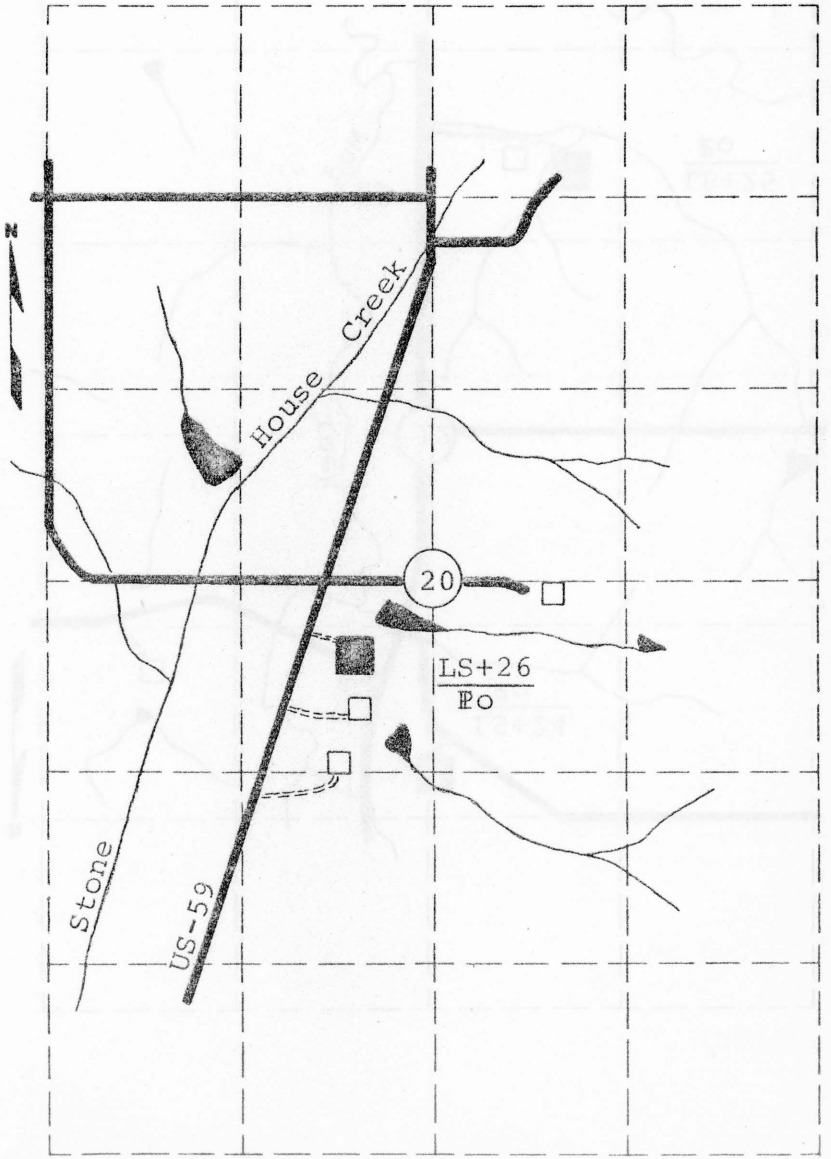
Specific Gravity (Sat.) 2.56, 2.53, 2.53, 2.52 (Dry)

Los Angeles Wear 29.5, 30.7, 35.6, 32.3

Absorption 2.40, 3.18, 3.62, 2.70 Soundness 0.95, 0.92, 0.76, 0.93

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+27 / Po Date January, 1968

Material Limestone County Jefferson

Location N½ Sec. 29 Twp. 11S Range 19E

Owner N. R. Hamm (name) Perry, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Oread Formation, Plattsmouth Member

Material Similar To SHC Form 619 No. 44-10

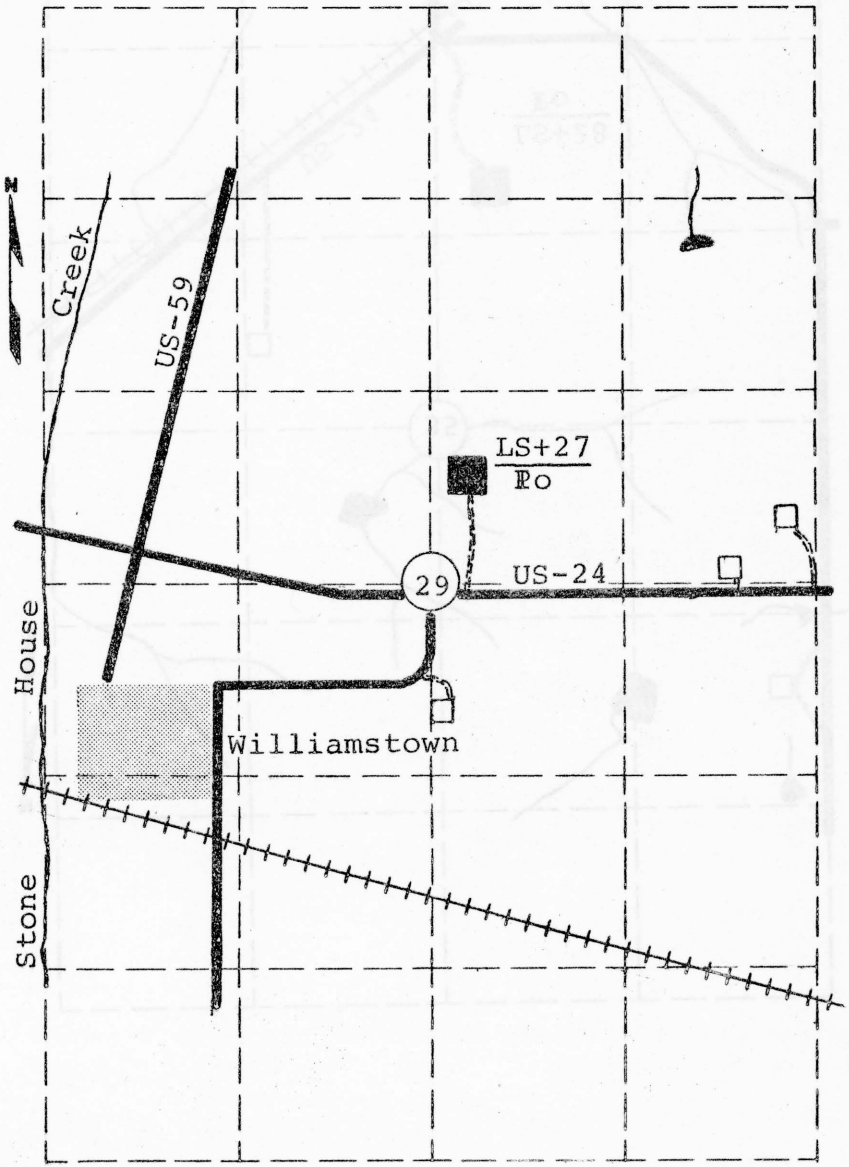
Specific Gravity (Sat.) (1) 2.53 (2) -- (3) 2.54 (Dry)

Los Angeles Wear (1) 31.1 (A), (2) 28.8 (C), (3) 32.7 (A)

Absorption (1) 2.94 (2) -- (3) 3.90 Soundness (1) 0.94 (2) -- (3) 0.88

Wt. Cu. Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+28 ℙo Date January, 1968

Material Limestone County Jefferson

Location SE¼ Sec. 35 Twp. 11S Range 19E

Owner Fred C. Heck (name) R. R. 3, Lawrence, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Oread Formation, Plattsmouth Member

Material Similar To SHC Form 619 No. 44-24

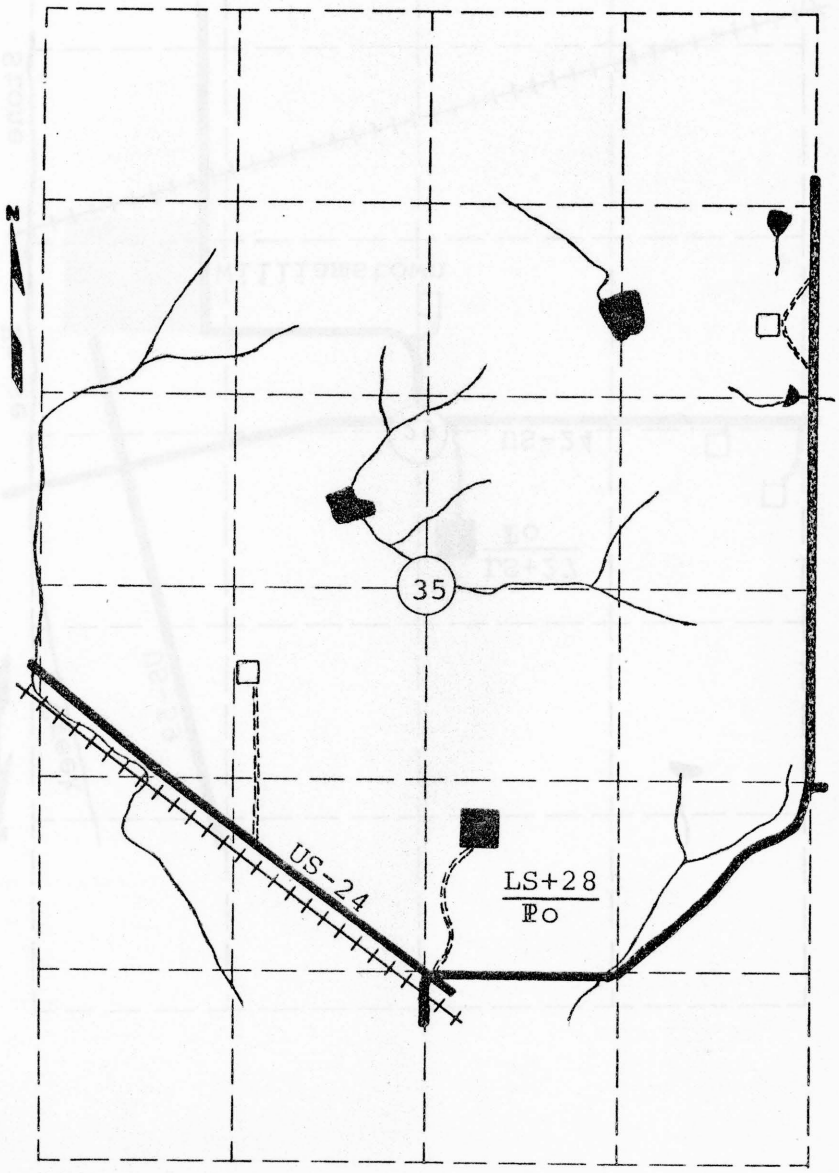
Specific Gravity (Sat.) 2.51 (Dry) 2.44

Los Angeles Wear (A) 28.6

Absorption 3.21 Soundness 0.96

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+29 / Po Date January, 1968

Material Limestone County Jefferson

Location NW¼ SE¼ Sec. 36 Twp. 11S Range 19E

Owner Elmer W. Ousdahl (name), 826 Schwarz Rd., Lawrence, Kans. (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Oread Formation, Plattsmouth Member

Material Similar To SHC Form 619 No. 44-15

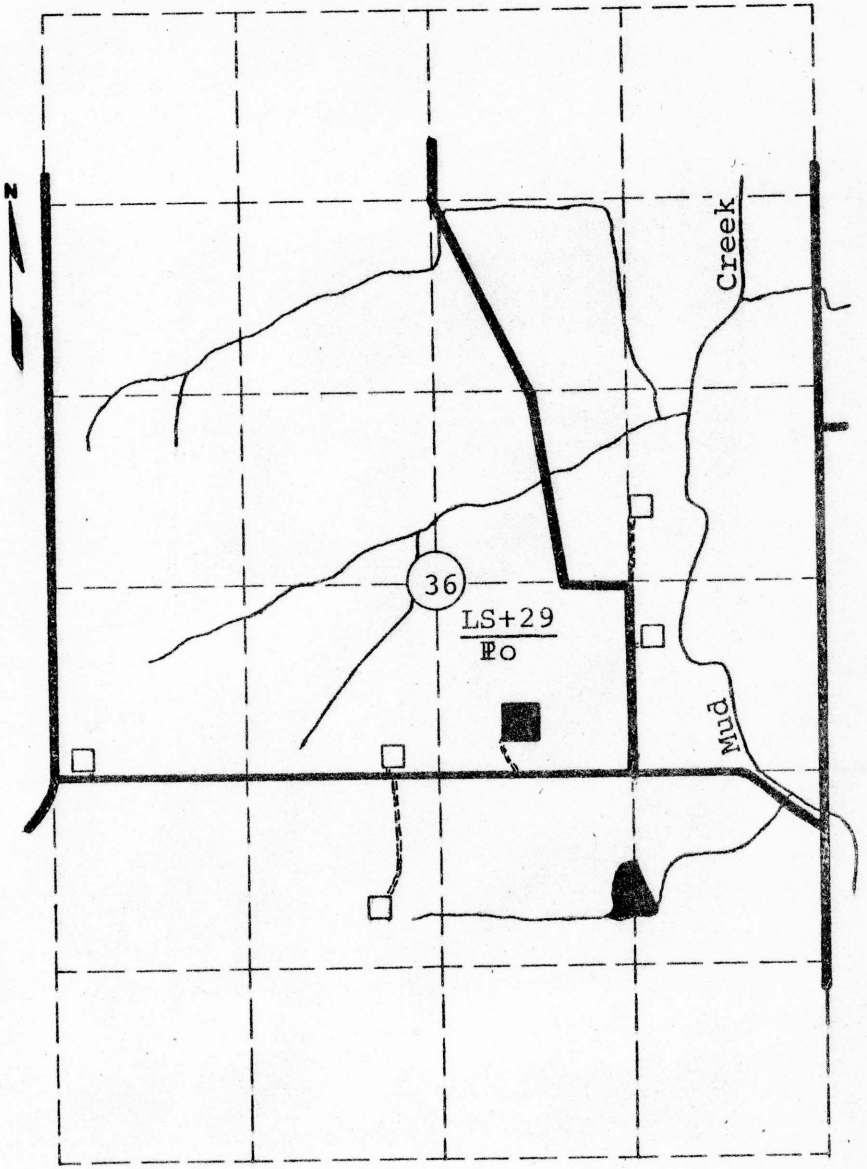
Specific Gravity (Sat.) 2.65 (Dry)

Los Angeles Wear 29.5(B)

Absorption 3.29 Soundness 0.95

Wt. Cu.Ft. Str. Ratio

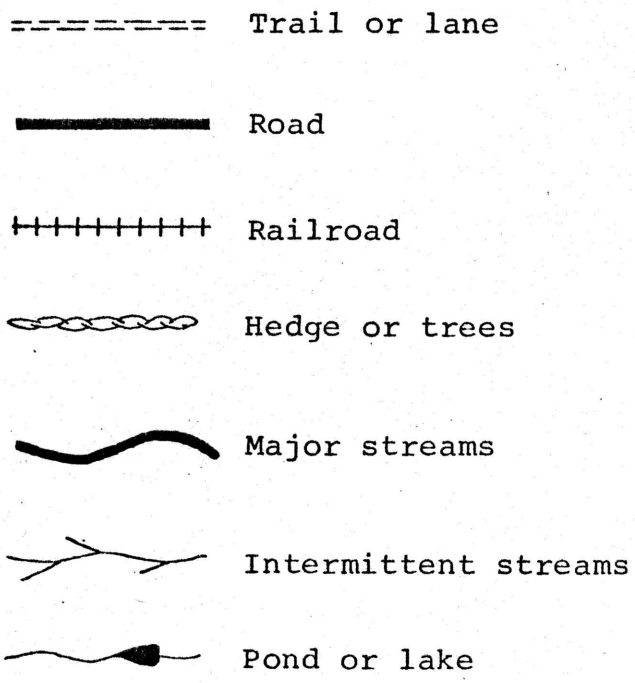
Remarks

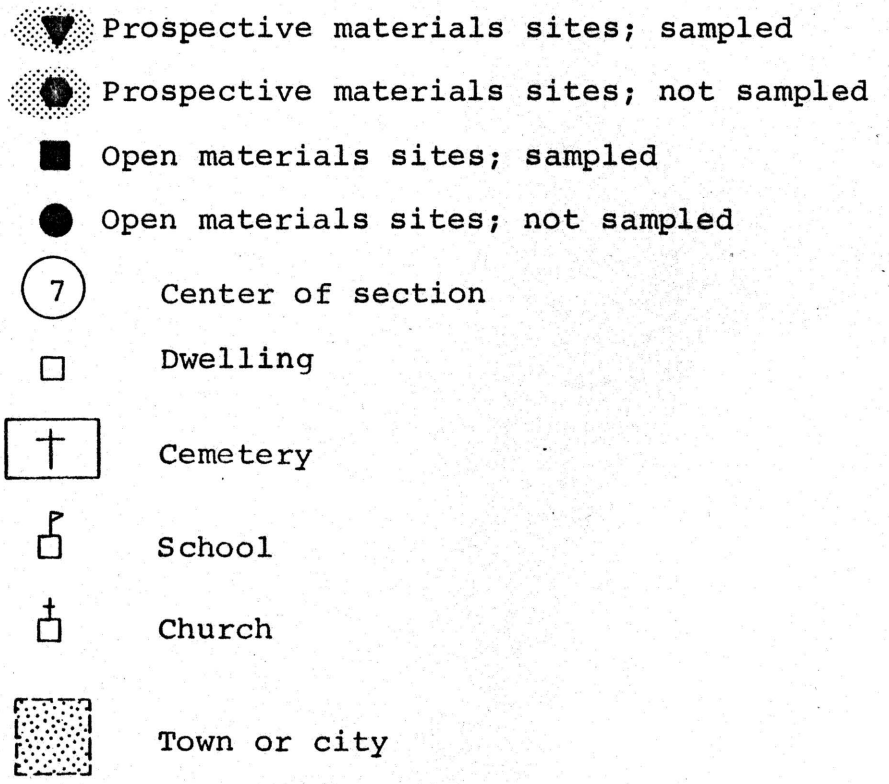


Scale: 1" = ¼ Mile

PROSPECTIVE MATERIALS SITES; SAMPLED

LEGEND





STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+30 / Pdc Date January, 1968

Material Limestone County Jefferson

Location NE¼ Sec. 5 Twp. 8S Range 20E

Owner Charles W. Domann (name) Winchester, Kansas (address)

Nature of Deposit Dry Accessibility Fair Site Located on Plate II

Status of Site Prospective site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. JF. Co. #6

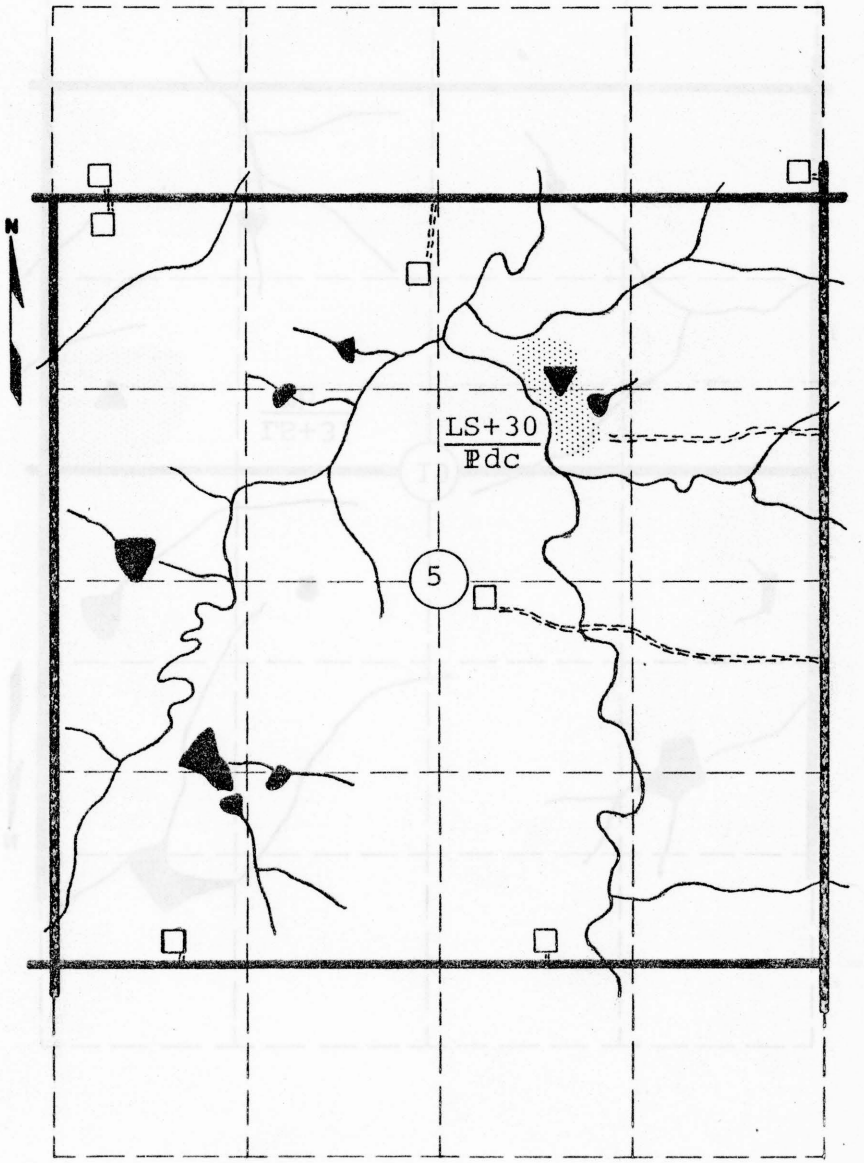
Specific Gravity (Sat.) 2.45 (Dry)

Los Angeles Wear (A) 33.6

Absorption 3.81 Soundness 0.94

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+31 / Pb Date January, 1968

Material Limestone County Jefferson

Location W½ SW¼ Sec. 19 Twp. 9S Range 17E

Owner Juanita K. Barnes (name), 1409 College, Topeka, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate III

Status of Site Prospective site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Bern Formation, Burlingame Member

Material Similar To SHC Form 619 No. 44-20

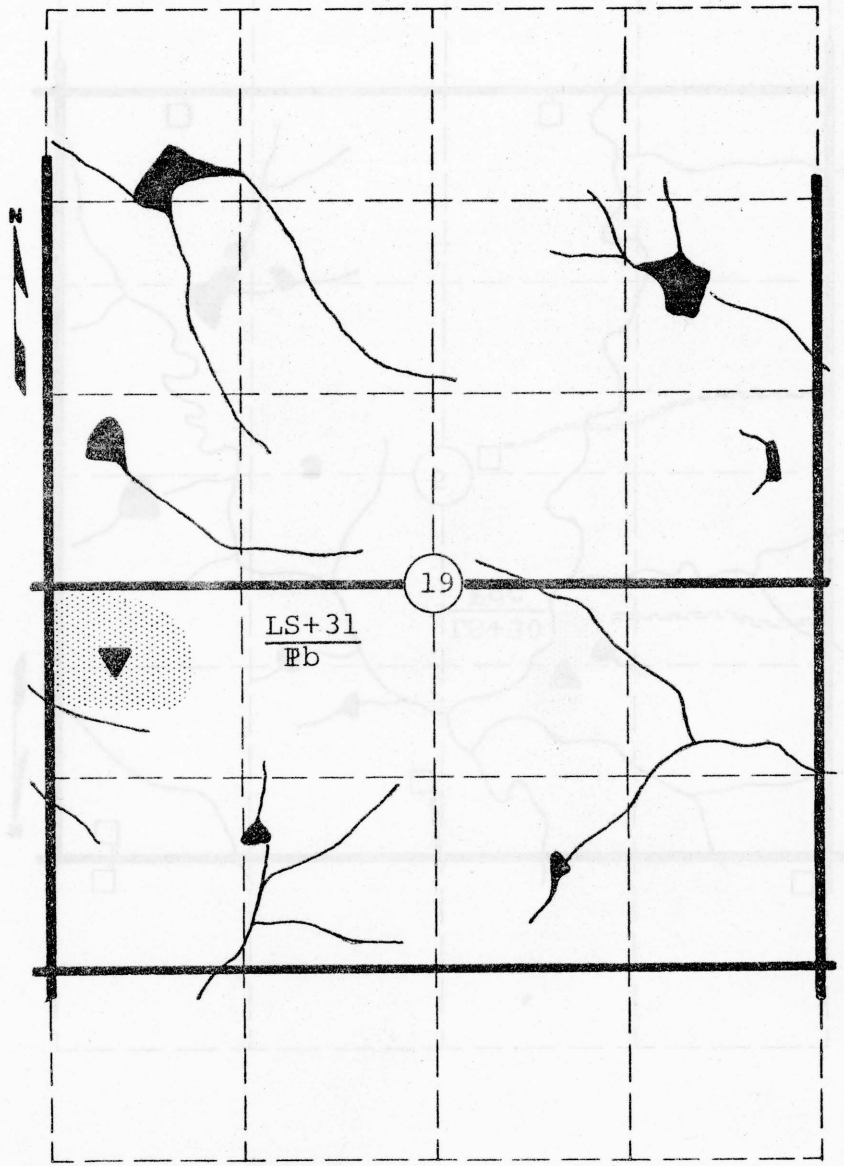
Specific Gravity (Sat.) 2.49 (Dry) 2.37

Los Angeles Wear (B) 25.4

Absorption 5.08 Soundness 0.94

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

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STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+32 / Pt Date January, 1968

Material Limestone County Jefferson

Location SE¼ Sec. 20 Twp. 9S Range 18E

Owner George A. Meyer (name) Oskaloosa, Kansas (address)

Nature of Deposit Dry Accessibility Fair Site Located on Plate III

Status of Site Prospective site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Topeka Formation

Material Similar To SHC Form 619 No. 44-7

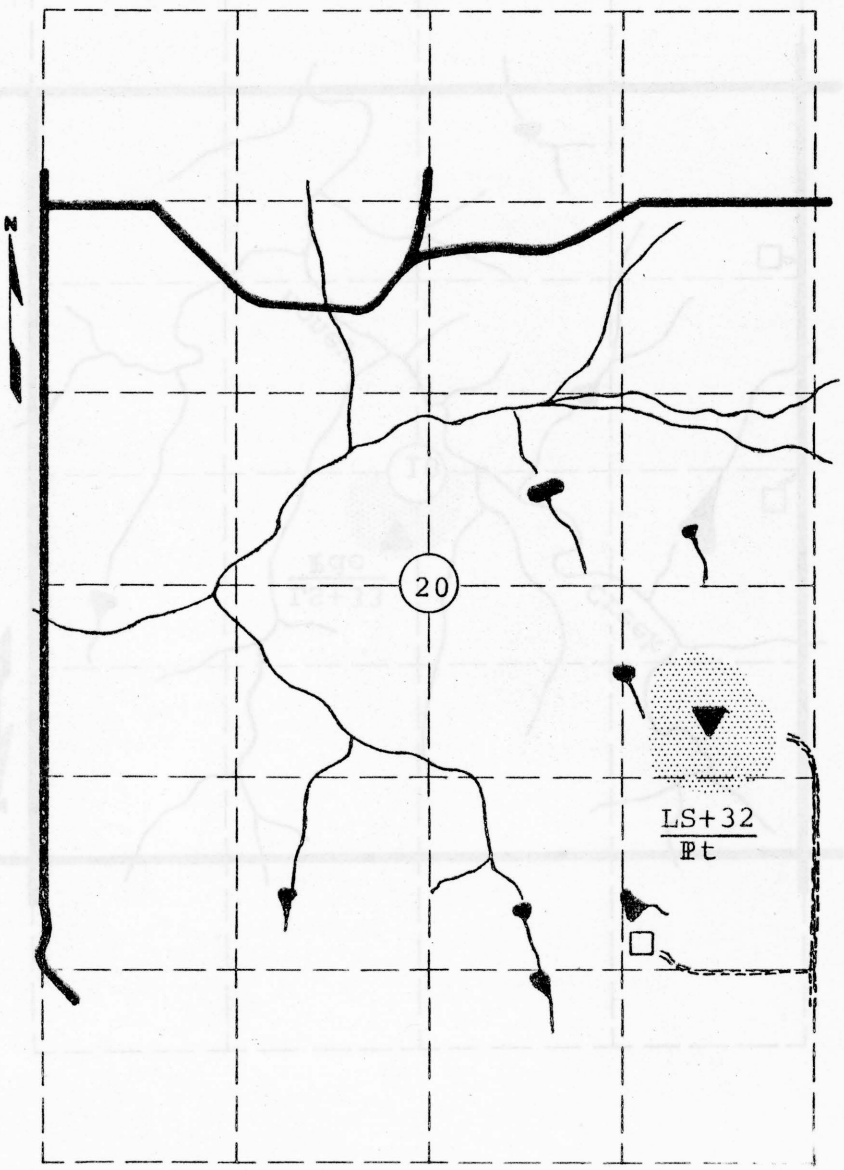
Specific Gravity (Sat.) 2.39 (Dry)

Los Angeles Wear (A) 39.4

Absorption 5.12 Soundness 0.73

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

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STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+33 / Pdc Date January, 1968

Material Limestone County Jefferson

Location Center of Sec. 10 Twp. 9S Range 19E

Owner Neil Curry (name) Winchester, Kansas (address)

Nature of Deposit Dry Accessibility Poor Site Located on Plate IV

Status of Site Prospective site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ervine Creek Member

Material Similar To SHC Form 619 No. JF. CO. #1

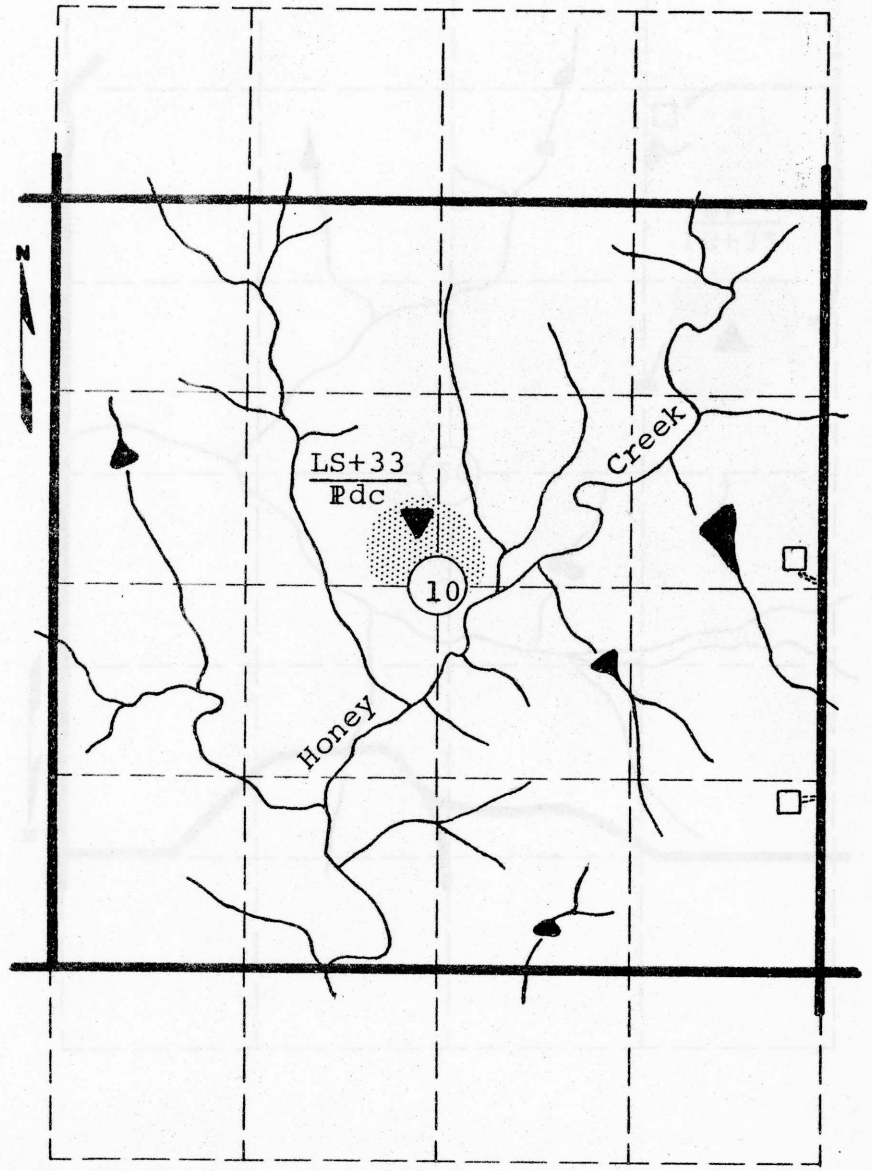
Specific Gravity (Sat.) 2.48, 2.38 (Dry)

Los Angeles Wear (A) 30.8, (A) 38.0

Absorption 2.60, 4.67 Soundness 0.89, 0.91

Wt. Cu.Ft. Str. Ratio

Remarks



Scale: 1" = ¼ Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+34 / Pdc Date January, 1968

Material Limestone County Jefferson

Location NW¼ Sec. 5 Twp. 10S Range 19E

Owner Ethel Peppard (name) Oskaloosa, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate IV

Status of Site Prospective site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Deer Creek Formation, Ozawkie Member

Material Similar To SHC Form 619 No. JF. Co. #3

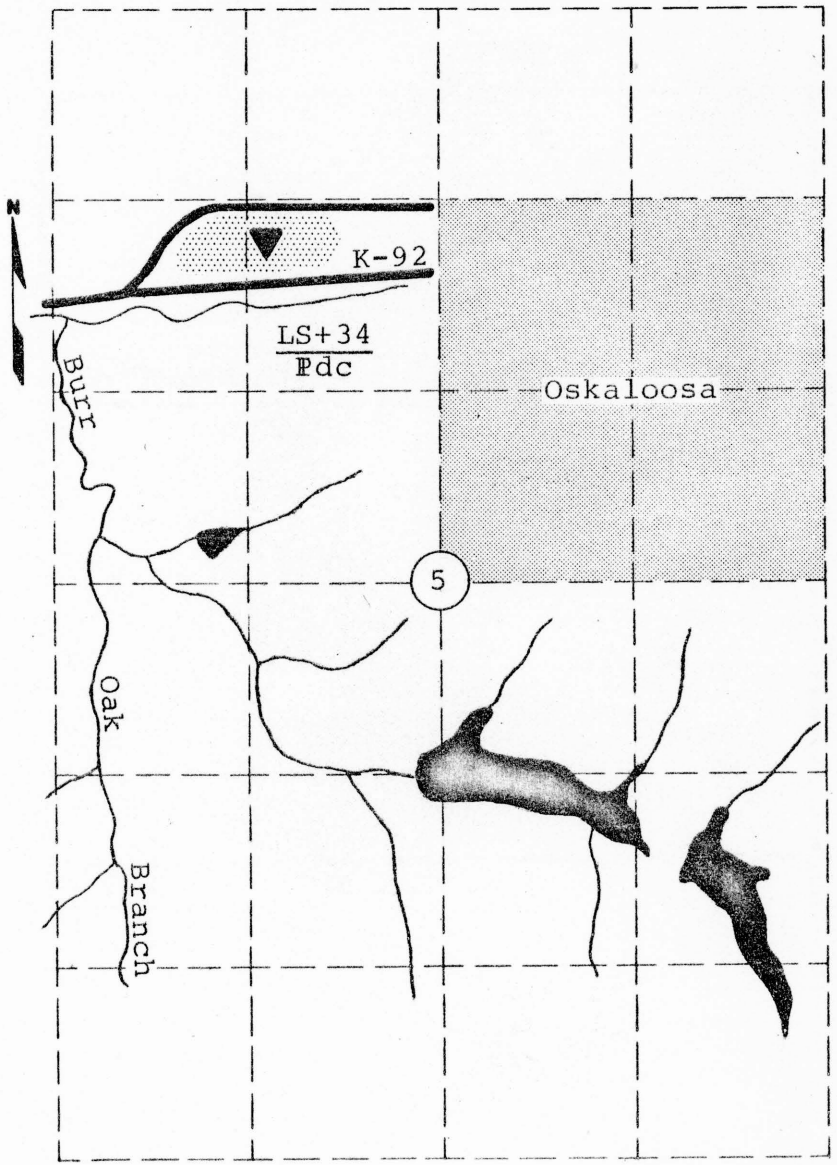
Specific Gravity (Sat.) 2.56, 2.35 (Dry)

Los Angeles Wear (A) 32.1, (A) 42.6

Absorption 2.25, 5.19 Soundness 0.91, 0.87

Wt. Cu.Ft. Str. Ratio

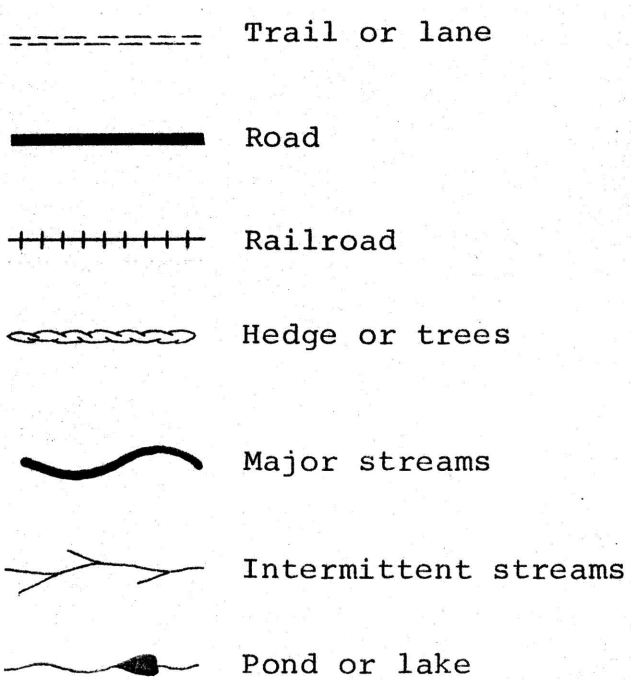
Remarks

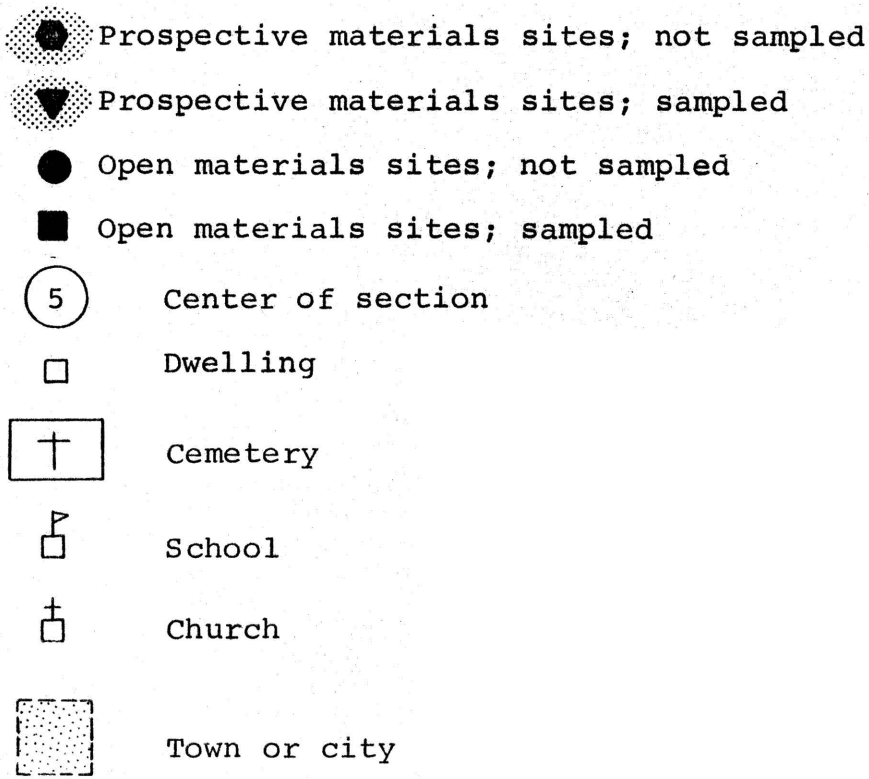


Scale: 1" = ¼ Mile

PROSPECTIVE MATERIALS SITES; NOT SAMPLED

LEGEND





STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+35 / Pt Date January, 1968

Material Limestone County Jefferson

Location SE¼ Sec. 34 Twp. 10S Range 17E

Owner Grace Griffits (name) Ozawkie, Kansas (address)

Nature of Deposit Dry Accessibility Good Site Located on Plate V

Status of Site Prospective site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained									Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30	50	100				

CORRELATION DATA

Geological Age Pennsylvanian

Geological Source Topeka Formation

Material Similar To Material produced at site LS+19 / Pt

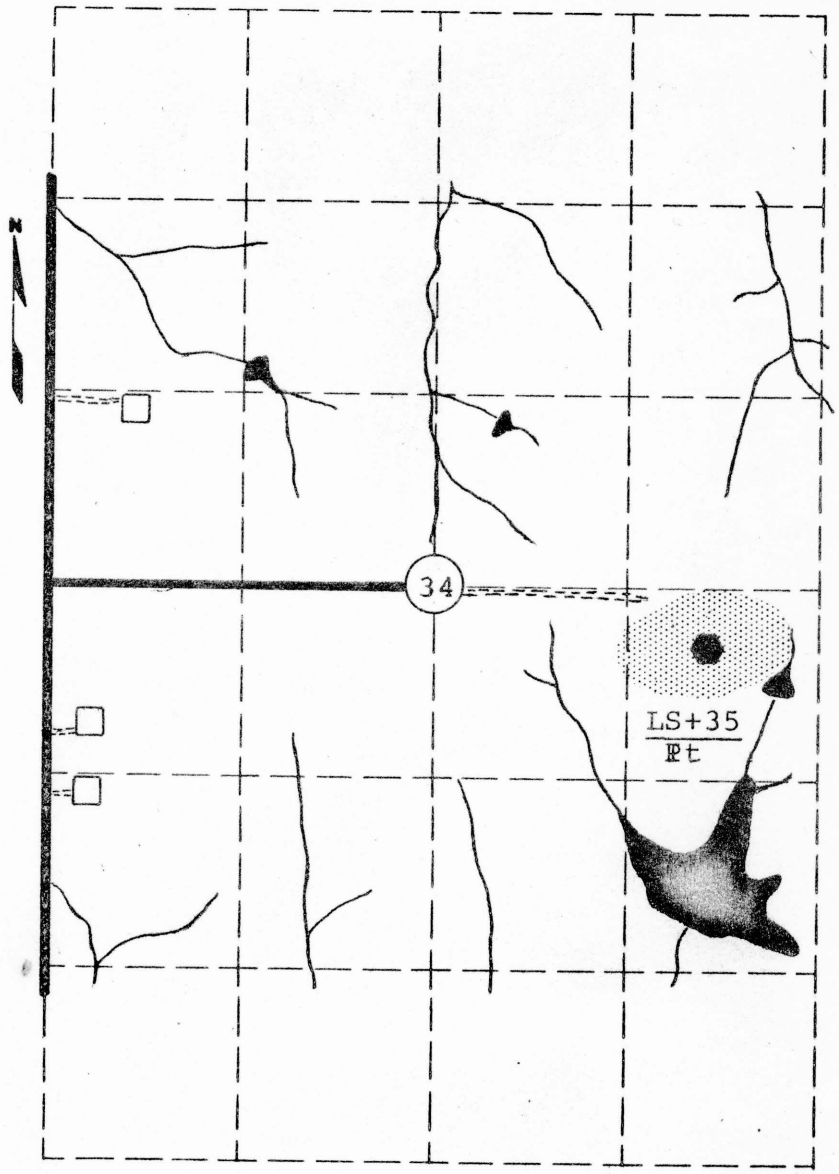
Specific Gravity (Sat.) _____ (Dry) _____

Los Angeles Wear _____

Absorption _____ Soundness _____

Wt. Cu.Ft. _____ Str. Ratio _____

Remarks _____



Scale: 1" = ¼ Mile

GLOSSARY

A.A.S.H.O.: American Association of State Highway Officials.

Absorption: Determined by tests performed in accordance with A.A.S.H.O. designation T85.

Aggrade: To raise the grade or level of a river valley or stream bed by depositing particles of clay, silt, sand, and gravel.

Alluvium: A deposit of clay, silt, sand, or gravel laid down by flowing water.

Anticline: A fold that is convexed upward.

Aquifer: Water-bearing geologic unit.

Arkosic gravel: Gravel composed of mineral fragments derived from weathered granite.

Bedding: A characteristic of some rock units which shows distinct layers due to the manner in which they were deposited.

Bentonite: A clay which is formed by the decomposition of volcanic ash and is largely composed of the clay minerals Montmorillonite and Beidellite.

Caliche: Secondary accumulation of calcium carbonate in unconsolidated deposits.

Coarse sand: An aggregation of unconsolidated mineral or rock particles, the dimensions of which are not less than one-half of a millimeter and not more than one millimeter.

Cobble: Rounded stones ranging from about two and one-half to ten inches in diameter.

Conglomerate: Consolidated or unconsolidated aggregate of rounded minerals or rock particles, the dimensions of which are usually more than two millimeters.

Chert: A dull, flint-like, siliceous rock.

Chonetes: Small fossil brachiopods with a shallow concave-convex shell and short pointed spines.

Colluvial deposits: Heterogeneous aggregates of rock debris resulting from the transporting action of gravity.

Concretion: Irregularly shaped nodules that occur in sedimentary rocks which form gradually by precipitation and around a definite nucleus.

Continental deposits: Deposits laid down on *land* by rivers, wind, glaciers, etc..

Consolidated deposit: Deposit of limestone, shale, or sandstone. In Kansas, this term generally applies to rock older than Pliocene age.

Crinoid columns: Fossils of an ancient group of sea-lily-type animals belonging to phylum Echinodermata.

Cross bedding: Sedimentary deposits whose bedding is inclined at various angles to the general stratification.

Degrade: To lower the level of a river valley or stream by washing away particles of clay, silt, sand, and gravel.

Detritus: Fragmental material derived from older rocks by disintegration.

Dip of geologic units: Angle of incline of the bed with respect to horizontal, and the direction in which these beds are inclined.

Dolomitic limestone: Limestone containing $MgCO_3$ (Magnesium Carbonate)

Eolian deposits: Wind deposited sediments such as loess or dune sand.

Evaporites: Group of sedimentary deposits that owe their origin mainly to the evaporation of restricted bodies of sea water.

Exposure pattern: Topographic feature formed on the land surface by the exposure of geologic units.

Facies change: Lateral change in the physical properties of a given bed as a result of a gradual change in its depositional environment and (or) parent material. For example, a shale unit may grade into a sandstone and still maintain its relative stratigraphic position.

Fine sand: An aggregate of unconsolidated minerals or rock particles the dimensions of which are usually considered to be not less than one-eighth of a millimeter and not more than one-fourth of a millimeter. The term refers to size of grain and not composition; however, since most sands are composed of quartz and feldspar, and the term is used without qualifications, a siliceous composition is implied.

Flaggy: Thin, horizontal-bedded.

Fluvial cycle: The stream-action cycle involving periods of deposition, erosion, and return to deposition.

Fluvial deposit: Deposits laid down by a river or stream.

Formation: A layer of persistent strata of one general kind of rock.

Fusilinids: Small marine fossils, about the shape and size of a grain of wheat, belonging to the Foraminifera.

Geologic era: Largest unit of geologic time (e.g. Paleozoic, Mesozoic, and Cenozoic).

Geologic period: A unit of geologic time, shorter than an era and longer than an epoch (e.g. Cambrian, Cretaceous, and Tertiary).

Geologic process: Erosion, deposition, and disastrophic methods by which the earth's surface has been shaped.

Geologic structure: The attitude of the rock units (i.e. whether they are horizontal or tilted).

Geologic system: Rocks or deposits that were laid down during a particular geologic period (e.g. the Pennsylvanian, Permian, and Quaternary).

Geologic unit: A geologic formation, a geologic member, or an unconsolidated deposit of Pleistocene age.

Glacial drift: Generally all rock debris which has been transported and deposited either directly by the ice or from the accompanying meltwater of the glacier.

Glaciolacustrine: Deposits laid down in glacial lakes.

Gradation factor: Sometimes referred to as the fineness modulus; the value obtained by adding the percentages of material retained on the 1½", 3/4", 3/8", 4, 8, 16, 30, 50, and 100 sieves, respectively, and dividing the sum by 100.

Grading A, B, C, and D: Determined by the abrasive charge for the Los Angeles wear test as specified in A.A.S.H.O. designation T96 and section Y1-14 of the State Highway Commission of Kansas Standard Specifications, 1966 edition.

Ground-water: Water in the zone of saturation; that is, below the water table.

Headwater components: Upper portion of a drainage system.

Igneous rocks: Rocks produced under conditions involving great heat; as rocks crystallized from a molten material.

Karst topography: Near-surface limestone areas marked by sinks or holes; usually underlain by caverns or smaller voids.

Landform: Feature on the land surface such as a terrace, sand dune, floodplain, etc..

Lava: Igneous rock that has been poured out upon the surface of the earth and there solidified.

Leach: The removal in solution of the more soluable minerals by percolating waters.

Light type surfacing: A surface course constructed from aggregate which is not bound by water, cement, or bituminous material.

Liquid limit: Determined by tests performed in accordance with section Y1-18 of the State Highway Commission of Kansas Standard Specifications, 1966 edition.

Lithology: Physical properties of rocks such as grain size, mineral content, and color.

Loess: Material generally composed of clay-bound silt deposited by wind.

Los Angeles wear: Determined by tests performed in accordance with A.A.S.H.O. designation T96 as modified by section Y1-14 of the State Highway Commission of Kansas Standard Specifications, 1966 edition.

Outwash: Material that is transported and deposited by glacial meltwater.

Marine deposits: Deposits laid down in a sea.

Material source bed: A geologic unit from which construction material is being or can be produced.

Matrix: The fine components of a rock that binds the larger components, sometimes called groundmass.

Member: A division of a formation, generally of distinct lithologic character or of only local extent.

Metamorphic rock: Rock which has been crystallized or otherwise altered by intense heat and pressure.

Micaceous: A term describing sands or sandstones containing mica flakes.

Montmorillonite: A clay mineral which has the outstanding feature of allowing water and other polar molecules to enter into the lattice causing it to expand.

Mortar bed: Calcium-cemented sand in the Ogallala Formation.

Oolitic limestone: Rock containing small, rounded grains that resemble fish eggs.

Open materials site: A pit or quarry which has produced or is producing material suitable for construction purposes.

Physiographic division: A division of the state, based on general geologic and (or) geographic features.

Plasticity index: Determined by tests performed in accordance with section Y1-18 of the State Highway Commission of Kansas Standard Specifications, 1966 edition.

Pleistocene Series: Deposits laid down during the Pleistocene Epoch.

Pliocene Epoch: The youngest major subdivision of the Tertiary Period.

Prospective materials site: A location where the geologic conditions are favorable for finding construction material.

Quartzite: Metamorphic rock produced by recrystallization of primarily quartz sandstone under heat and pressure. Term is sometimes misused for sedimentary quartzite.

Quartzose: Sands and sandstones essentially composed of quartz.

Red Beds: Red sandstone, silstone, and silty shale containing thin zones of limestone, dolomite, and gypsum. Most exposed Red Beds in Kansas are Permian in age; however, some Cretaceous and a few Jurassic Red Beds are found.

Residual soil: In-place material resulting from the decomposition of rocks.

Sedimentary Quartzite: Term applied to scattered zones of calcium carbonate and silica-cemented sandstone in the Dakota Formation. Material is so well bonded that a fracture will penetrate the individual grains rather than break around them.

Siltstone: A very fine-grained stone composed of silt-sized particles.

Soundness: Determined by tests performed in accordance with section Y1-15 of the State Highway Commission of Kansas Standard Specifications, 1966 edition.

Specific gravity: Determined by tests performed in accordance with A.A.S.H.O. designation T84 for fine aggregate and T85 for coarse aggregate.

Stereoscopic vision: Three-dimensional vision by means of viewing identical images on two photographs exposed from equal distance but at different angles.

Stratigraphic position: The vertical position of a geologic unit in relation to other geologic units.

Stratum: A single mass of sedimentary rock that is separable along well defined bedding planes.

Stream meander: One of a series of bends or curves in the course of a stream caused by lateral movement of a stream in its valley.

Stream scour: Downward erosion of a stream through its alluvium.

Strength ratio: Determined by tests performed in accordance with A.A.S.H.O. designation T19.

Terrace: A plain built up by the deposition of sediments by water.

Trunk stream: A major drainage channel in a given area.

Unconsolidated deposits: Deposits of clay, silt, sand, or gravel that are not cemented together.

Varigated shale: Shale displaying variable coloring of red, green, and gray.

Volcanic ash: The finely-divided, fragmental, silica rock material blown from volcanoes during explosive eruptions.

Wash: (Material passing the no. 200 sieve.) Determined by tests performed in accordance with A.A.S.H.O. designation T11.

Weathering: The disintergration (physical change) or decomposition (chemical change) of rock by atmospheric agents.

Weight per cubic foot: Determined by tests performed in accordance with A.A.S.H.O. designation T19.

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