

OPEN MATERIALS SITES ; SAMPLED

LEGEND

===== Trail or lane

———— Road

+ + + + + Railroad

~~~~~ Hedge or trees

~~~~~  
Name Major streams

~~~~~ Intermittent streams

~~~~~ Pond or lake

■ Open materials sites; sampled

● Open materials sites; not sampled

▼ Prospective materials sites; sampled

◆ Prospective materials sites; not sampled

⑤ Center of section

□ Dwelling

⊕ Cemetery

□ School

⊕ Church

▒ Town or city

MATERIAL SITE DATA FORM

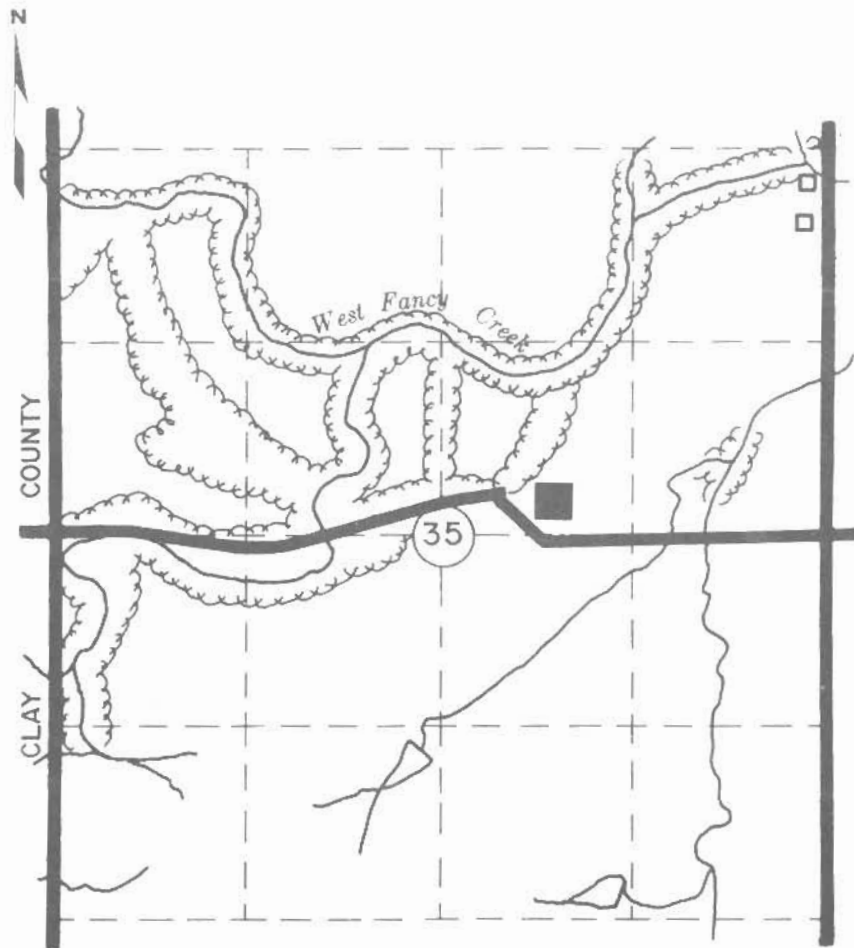
Site No. LS+1
Pdt Date October, 1977
 Material Limestone County Riley
 Location SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec 35 Twp. 6S Range 4E
 Owner J. Wendell Green, Kansas
 Nature of Deposit Dry name address
 Accessibility Fair Site Located on Plate I
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | LL | PI |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|----|----|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle, Shale Fm. Towanda Limestone Member
 Material Similar To KDOT Lab No. 67-4573
 Specific Gravity (Sat.) 2.35 (Dry) 2.17
 Los Angeles Wear 42.9B
 Absorption 8.01 Soundness 0.81
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. 81-52



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

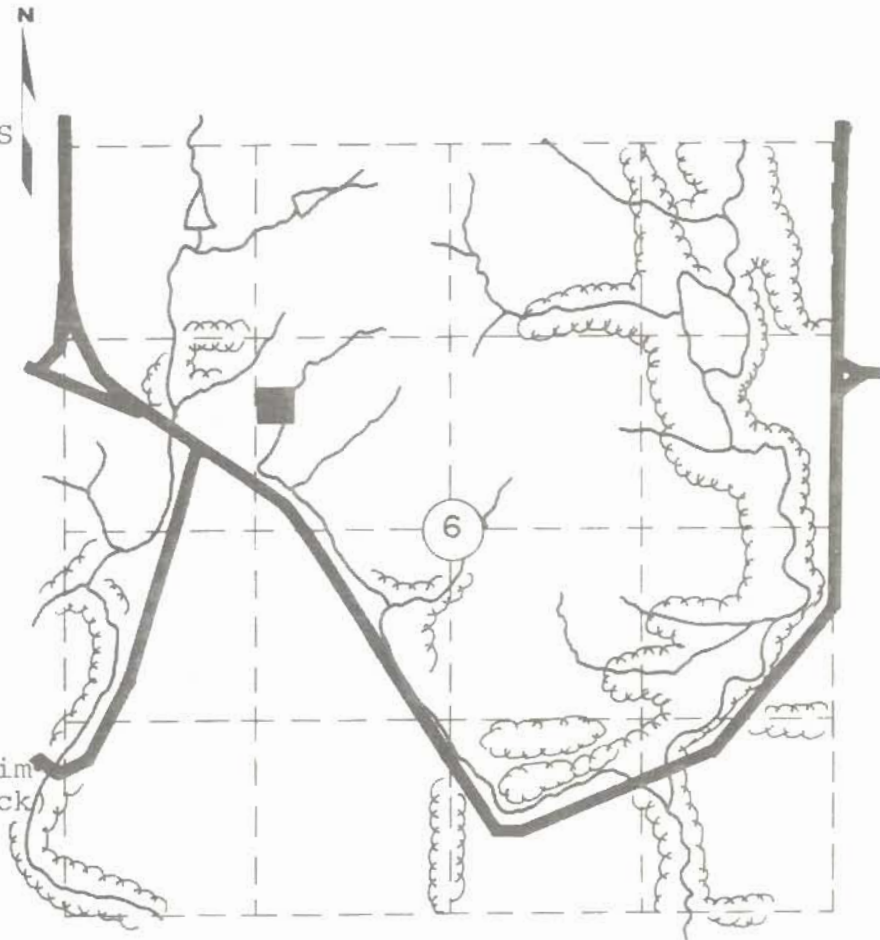
Site No. LS-2
Pbfr Date October, 1977
 Material Limestone County Riley
 Location E $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 6 Twp. 7S Range 6E
 Owner Arthur J. Peter 328 Webster St. Clay Center, KS
 Nature of Deposit Dry Accessibility Fair Site Located on Plate I
 Status of Site Open Materials Site, Sampled

EXPLORATION DATA

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

Geological Age Permian
 Geological Source Barneston Limestone Fm.-Fort Riley Ls.MBR. (Rim Rock)
 Material Similar To KDOT Lab. No. (1) 49439 (2) 49440
(3) 49441
 Specific Gravity (Sat.) (1) 2.22 (2) 2.34 (3) 2.43
(1) 52.4 (A) (2) 49.5 (A) (3) 33.6 (A)
 Los Angeles Wear (1) 7.82 (2) 4.18 (3) 4.51 Soundness (1) 0.77 (2) 0.98 (3) 0.89
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. Riley Co. #1



Site No. LS+3
Pdt Date October, 1977
 Material Limestone County Riley
 Location SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 34 Twp 6S Range 6E
 Owner John Paul Rosecrants New Orleans, LA.
 Nature of Deposit Dry name address
 Accessibility Good Site Located on Plate II
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.L. |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|------|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Member
 Material Similar To KDOT Lab. No. 67-2482 67-3027

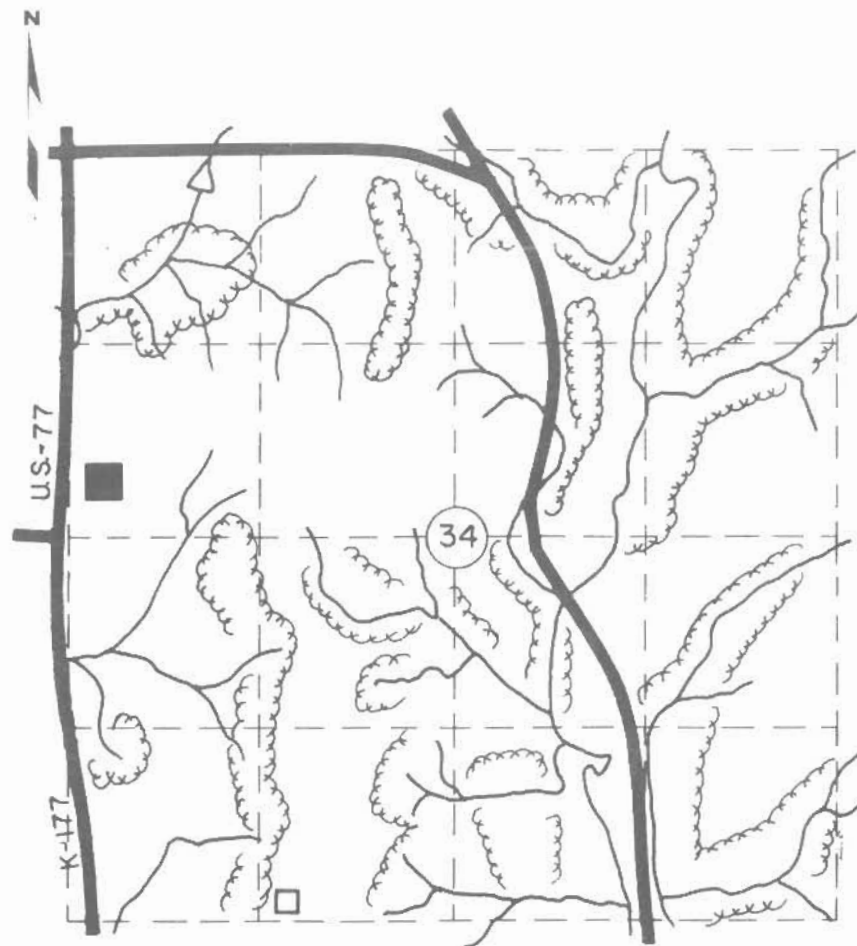
Specific Gravity (Sat.) 2.51 2.50 (Dry) 2.43 2.41

Los Angeles Wear 32.7 35.8

Absorption 3.42 3.42 Soundness 0.93 0.92

Wt. Cu. Ft. _____ Str. Ratio _____

Remarks KDOT Materials Department Site No. 81-49



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+4
Pbfr Date October, 1977
 Material Limestone County Riley
 Location NW¼ Sec. 3 Twp. 7S Range 6E
 Owner Paul Rasmussen Route 1 Randolph, Ks
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate II
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | Wash 200 | GF | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|----|---|-----|---|---|----|----|----|-----|--|----------|----|------|------|
| | | | | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Barneston Limestone Fm.-Fort Riley LS MBR
 Material Similar To KDOT Lab. No. 14072 14614 14418 (rimrock)

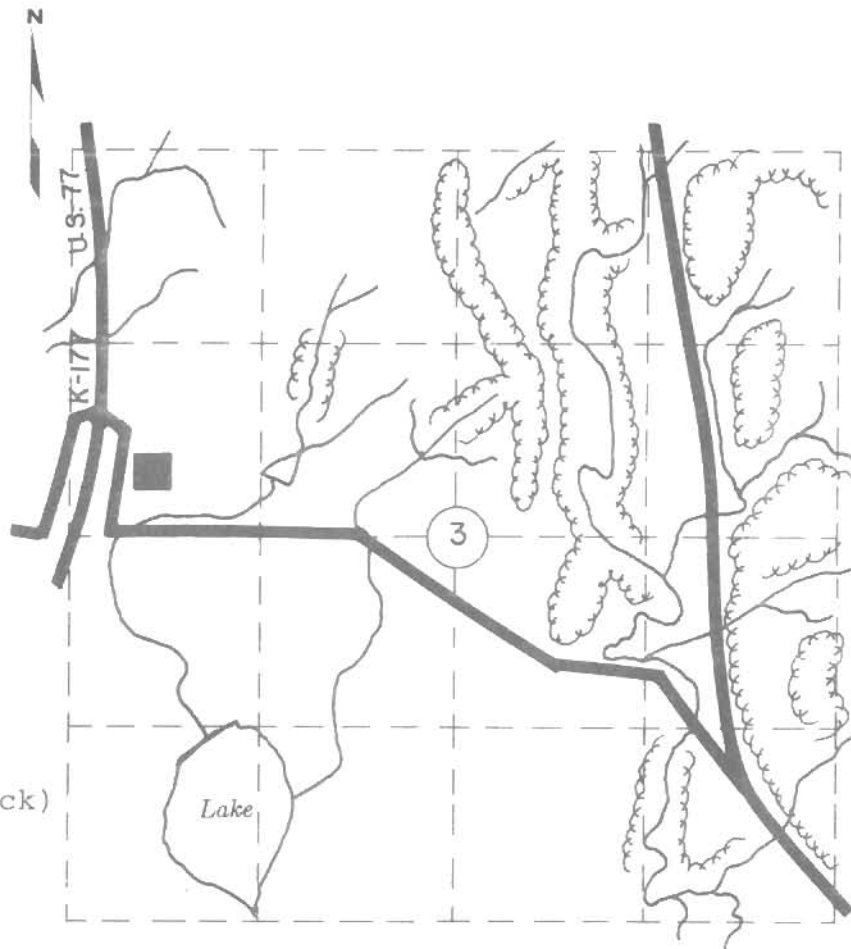
Specific Gravity (Sat.) 2.32 2.36 2.37 (Dry) 2.14 2.22 2.18

Los Angeles Wear 47.5 42.1 58.1

Absorption 8.49 6.47 Soundness 0.88 0.90 0.64

Wt. Cu. Ft. _____ Str. Ratio _____

Remarks KDOT Materials Department Site No. 81-31



Scale: 1 Inch = ¼ Mile

DATA FORM

Site No. LS+5
Pbfr Date October, 1977
 Material Limestone County Riley
 Location SE 1/4 NE 1/4 Sec. 6 Twp. 6S Range 7E
 Owner Lauren M. Smercher Blue Rapids, Ks
name address
 Nature of Deposit Dry Accessibility Poor Site Located on Plate II
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

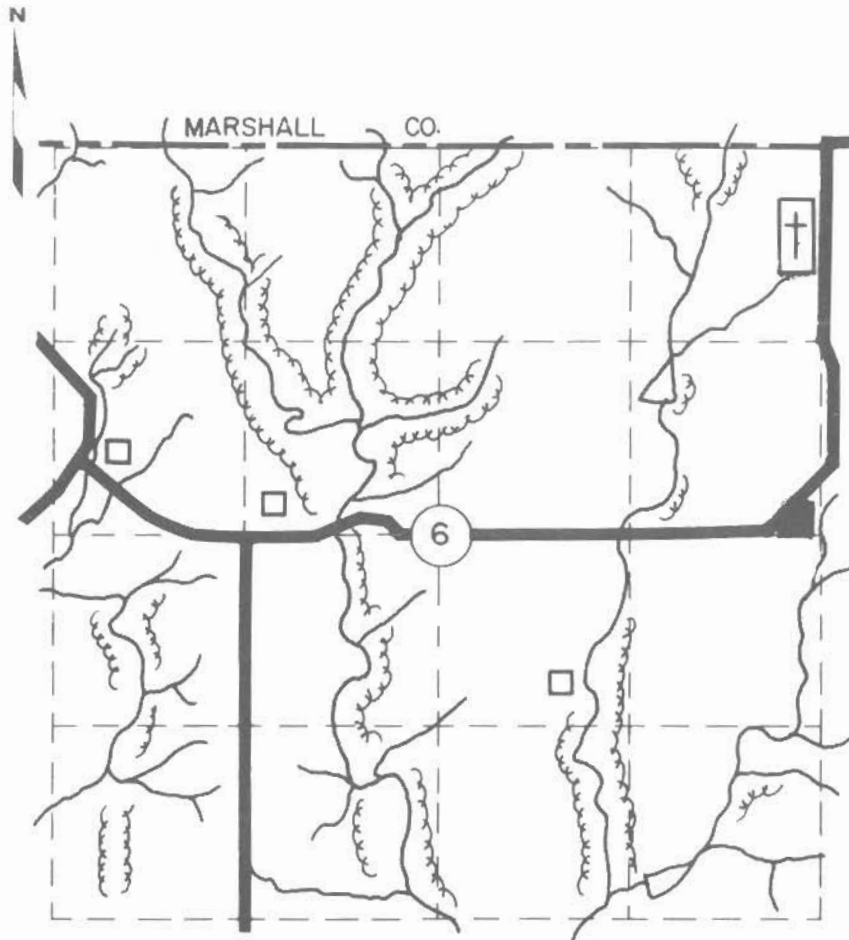
| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|------|------|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

Geological Age Permian
 Geological Source Barneston LS. Fm. Fort Riley Limestone Member
 Material Similar To KDOT Lab. No. 68-399

Specific Gravity (Sat.) 2.56 (Dry) 2.48
 Los Angeles Wear 26.9B
 Absorption 3.07 Soundness 0.97
 Wt. Cu. Ft. _____ Str. Ratio _____

Remarks KDOT Materials Department Site No. 81-53



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

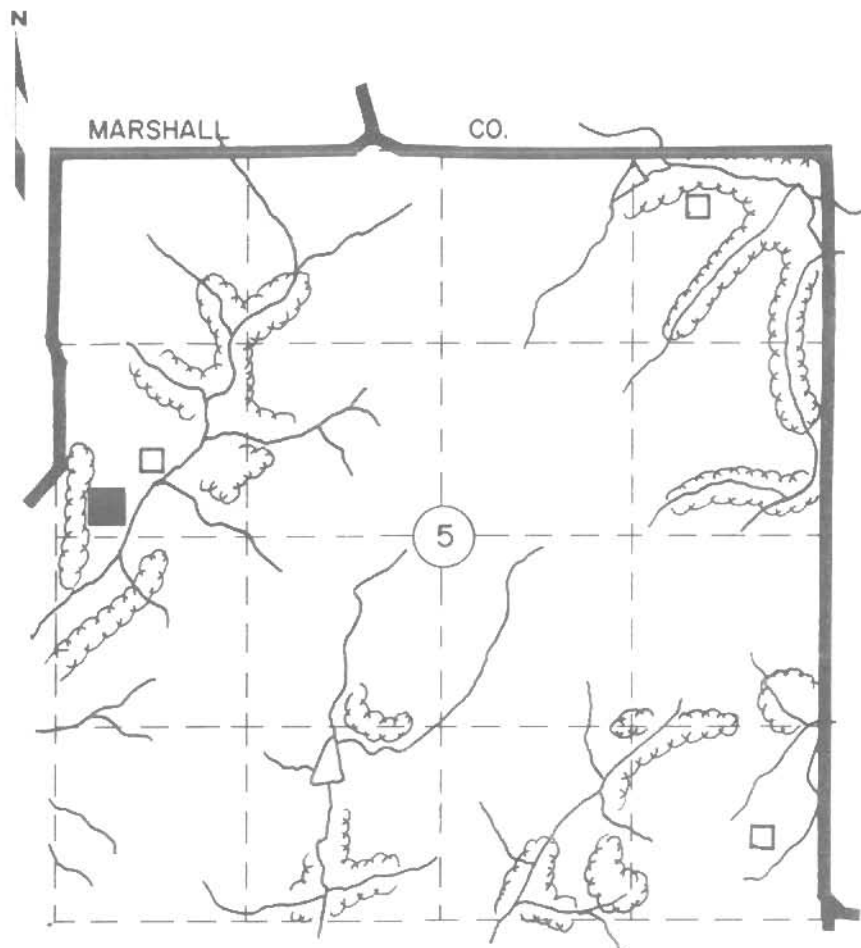
Site No. LS+6
Pbfr Date October, 1977
 Material Limestone County Riley
 Location SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 5 Twp. 6S Range 7E
 Owner Carol A. Gerlach Et Al Blue Rapids, KS
 Nature of Deposit Dry Accessibility Fair Site Located on Plate II
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|---|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Barneston Ls. Fm. Fort Riley Limestone Mbr.
 Material Similar To KDOT Lab No. 67-3763
 Specific Gravity (Sat.) 2.56 (Dry) 2.49
 Los Angeles Wear 29.2 B
 Absorption 2.97 Soundness 0.97
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. 81-51



Scale: 1 Inch = ¼ Mile

MATERIAL SITE DATA FORM

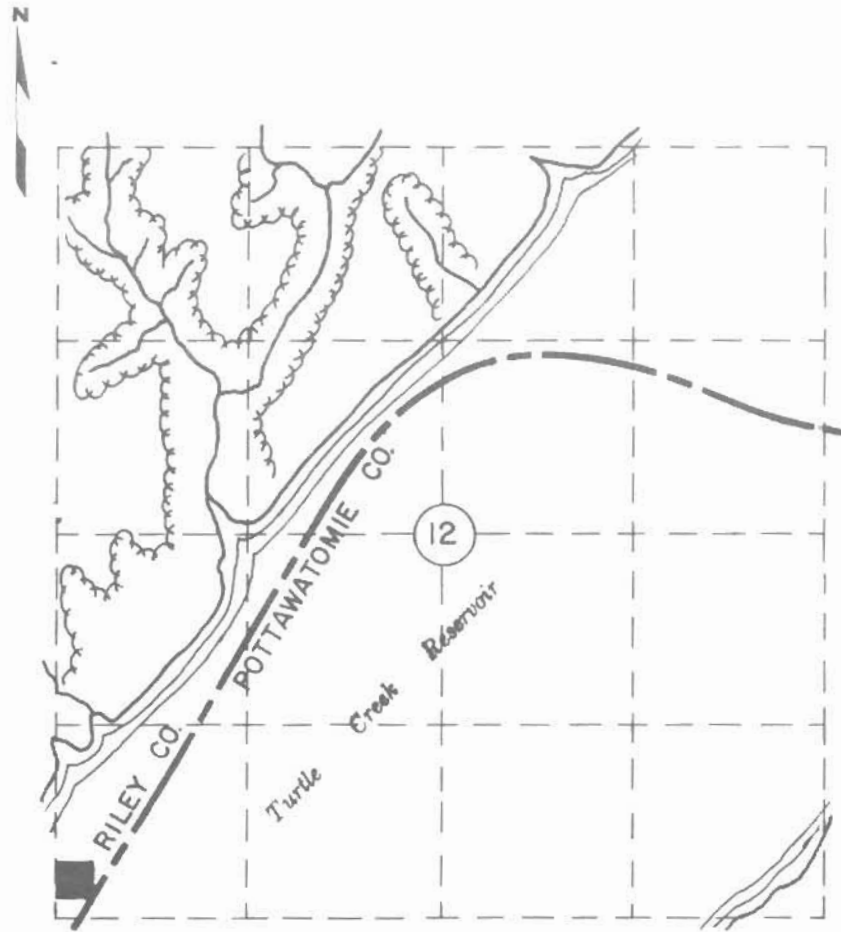
Site No. SG+7
Qa1 Date October, 1977
 Material Sand - Gravel County Riley
 Location SW $\frac{1}{4}$ Sec. 12 Twp. 7S Range 6E
 Owner Fay E. Attwood address Randolph, KS
 Nature of Deposit Wet Accessibility Good Site Located on Plate II
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|----|----|----|----|----|-----|------|------|----------|------|------|------|
| | | | | 1/2 | 3/8 | 3/4 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
| | | | | 0 | 3 | 7 | 17 | 35 | 55 | 79 | 94 | 99 | 0.25 | 3.90 | | | | |
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CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To KDOT Lab. No. 18973
 Specific Gravity (Sat.) 2.61 (Dry) _____
 Los Angeles Wear 35.8
 Absorption 0.5 Soundness 0.97
 Wt. Cu. Fr. 116.18 Str. Ratio 1.48
 Remarks KDOT Materials Department Site No. 81-34 Reservoir
Covered H₂O.



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+8
Pdt Date October, 1977
 Material Limestone County Riley
 Location SE 1/4 Sec. 15 Twp. 7S Range 5E
 Owner Richard E. Stadel Randolph, KS
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To KDOT Lab No. 11657 11697A 11697B 11697C

Specific Gravity (Sat.) 2.46 ^A 2.44 ^B 2.46 ^C 2.48 (Dry) 2.35 ^A 2.32 ^B 2.34 ^C 2.38

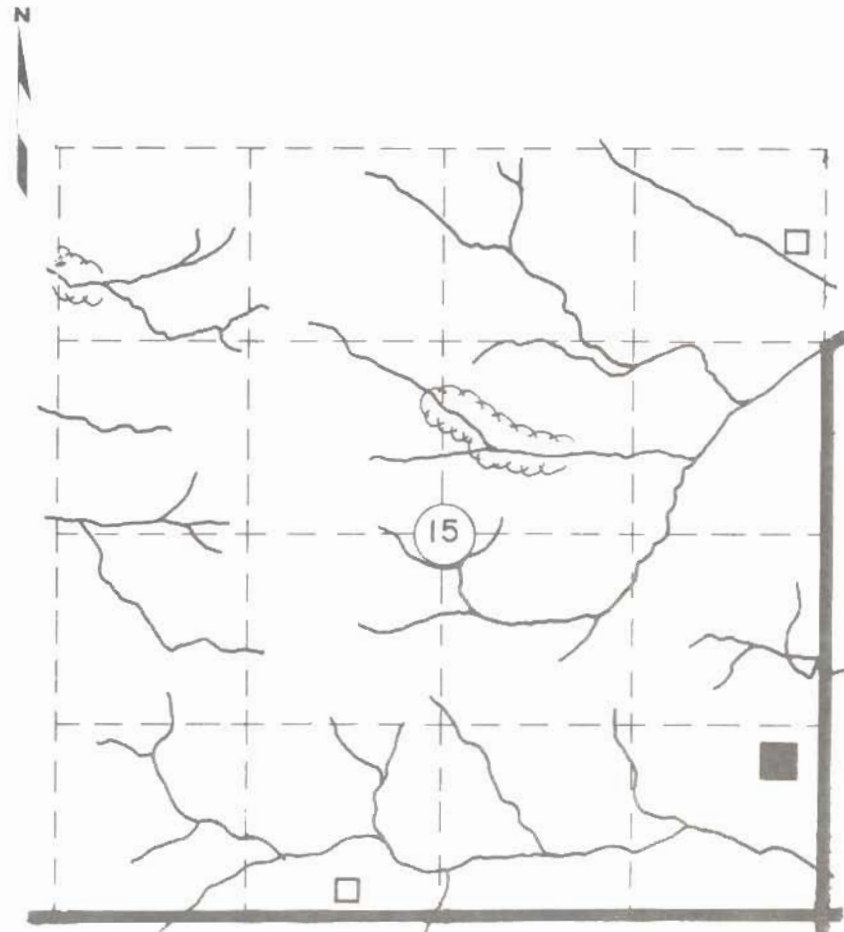
Los Angeles Wear 32.0

Absorption 4.86 ^A 5.51 ^B 4.98 ^C 4.42 Soundness 0.89

Wt. Cu. Ft. _____ Str. Ratio _____

Remarks KDOT Materials Department; Site No. 81-29

38



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+9
Pdt Date October, 1977
 Material Limestone County Riley
 Location NW 1/4 SW 1/4 Sec. 18 Twp. 7S Range 5E
 Owner Bernard R. & Ernest Kunze Randolph, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Sampled

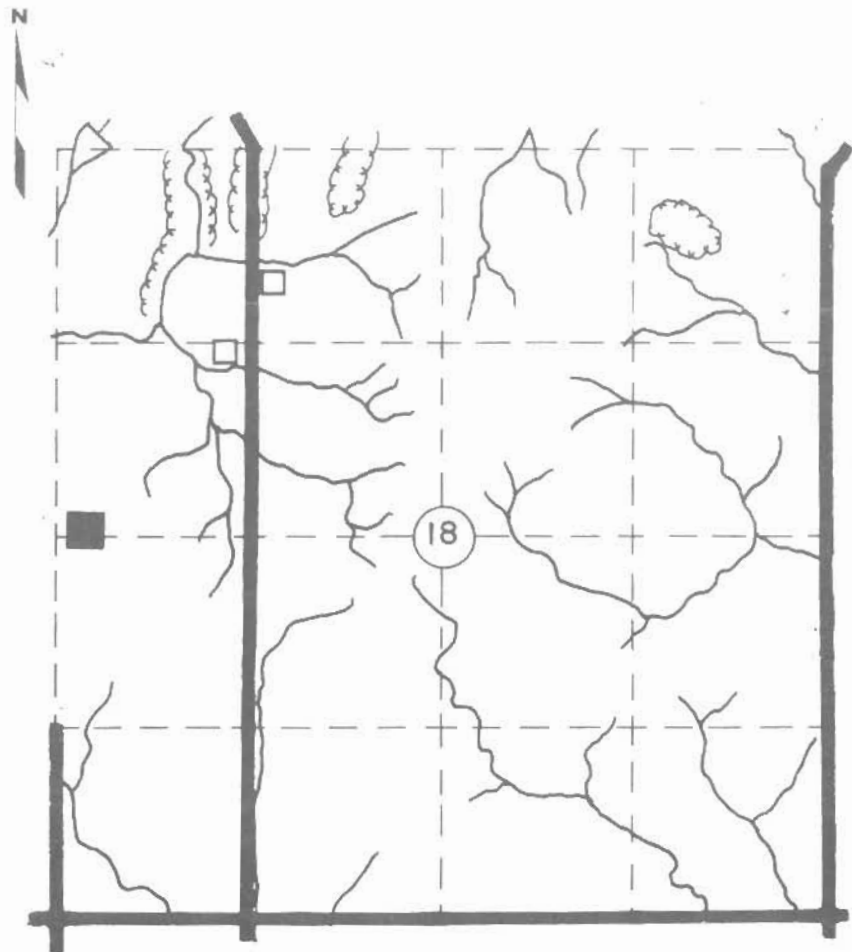
EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To KDOT Lab. No. 8807
 Specific Gravity (Sat.) 2.52 (Dry) 2.42
 Los Angeles Wear 28.6
 Absorption 4.18 Soundness 0.89
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. 81-27

39



Scale: 1 inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS-10
Pdt Date October, 1977
 Material Limestone County Riley
 Location NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 11 Twp. 9S Range 4E
 Owner U. S. Government
 Nature of Deposit Dry name address
 Accessibility Fair Site Located on Plate V
 Status of Site Open Materials Site; Sampled

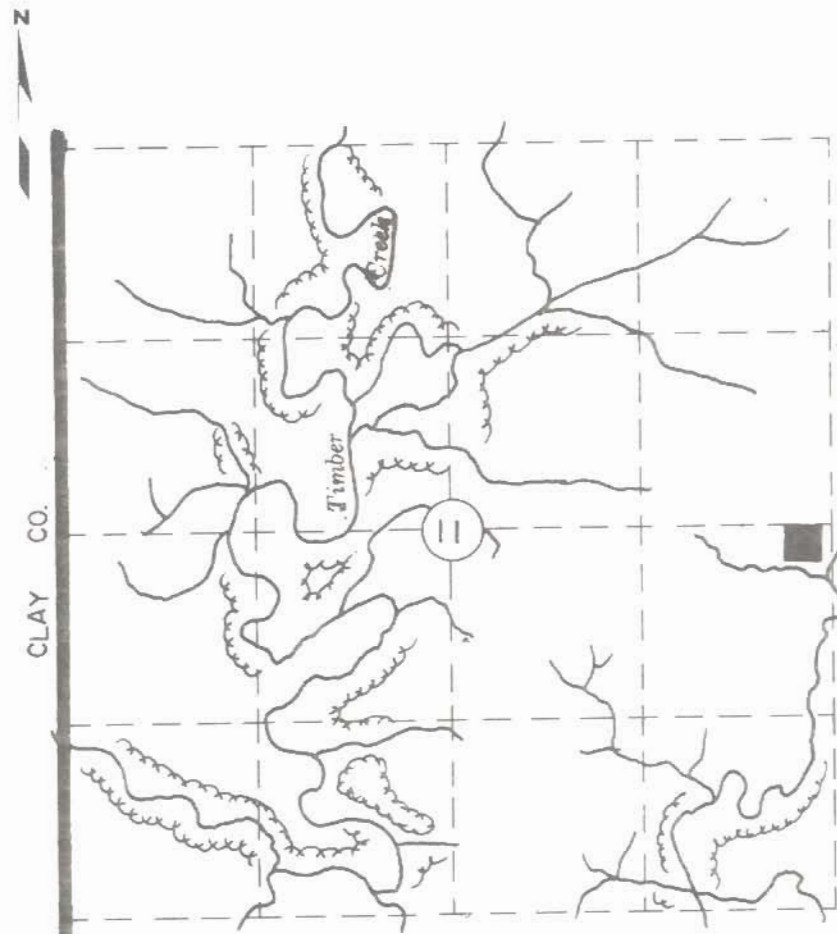
EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|-----------------|---------------|---------------|---|---|----|----|----|-----|--|----------|------|----|------|
| | | | | 1 $\frac{1}{2}$ | $\frac{3}{4}$ | $\frac{3}{8}$ | 4 | 8 | 16 | 30 | 50 | 100 | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To KDOT Lab. No. 49442 49443

Specific Gravity (Sat.) 2.50 2.22 (Dry)
 Los Angeles Wear 32.9(A) 28.4(A)
 Absorption 3.06 2.77 Soundness 0.95 0.95
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. 81-3



Scale: 1 Inch = 1/2 Mile

MATERIAL SIT

Site No. LS+11
Pdt Date October, 1977
 Material Limestone County Riley
 Location NW¼ Sec. 24 Twp. 9S Range 4E
 Owner U.S. Government
 Nature of Deposit Dry Accessibility Good address _____ Site Located on Plate V
 Status of Site Open Materials Site; Sampled

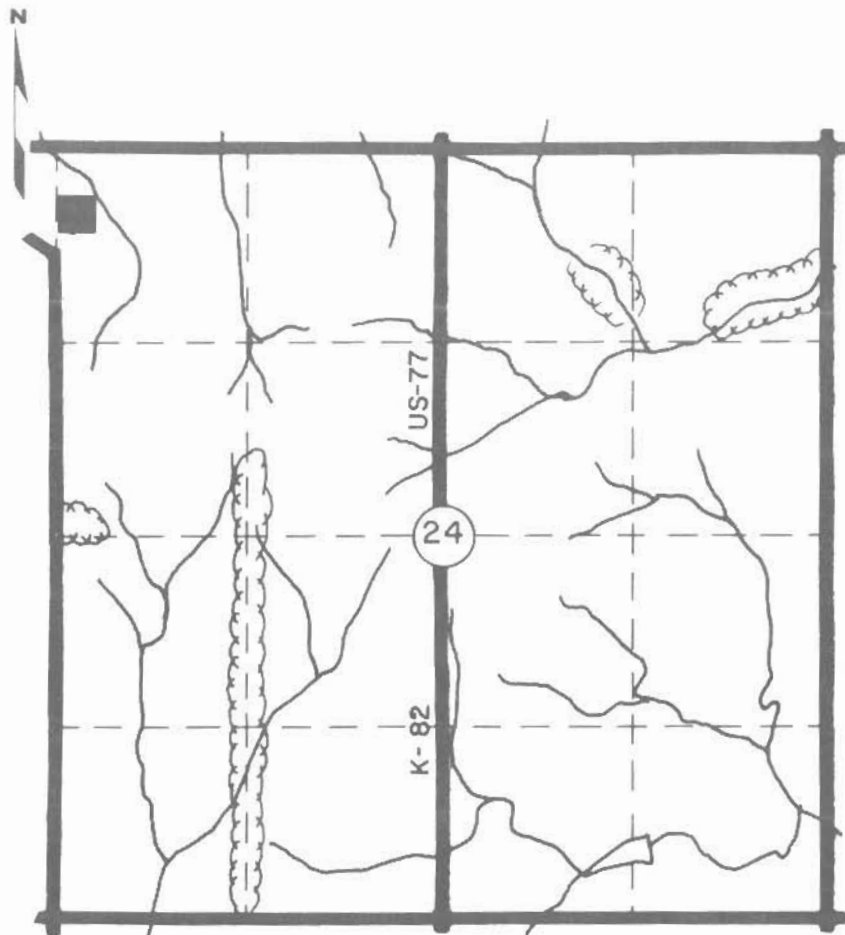
EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|----|---|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To KDOT Lab. No. 67-1935 67-2769 67-2484

Specific Gravity (Sat.) 2.45 2.48 2.43 (Dry) 2.36 2.40 2.32
 Los Angeles Wear 31.6B 28.5B 34.1B
 Absorption 4.03 3.34 4.66 Soundness 0.93 0.97 0.95
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. 81-48



Scale: 1 Inch = ¼ Mile

MATERIAL SITE DATA FORM

Site No. LS+12
 Pdt

Date October, 1977

Material Limestone County Riley

Location SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 27 Twp. 8S Range 6E

Owner Raymond L. Nelson Riley, KS
name address

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

Geological Age Permian

Geological Source Doyle Shale Fm. Towanda Limestone Mbr.

Material Similar To KDOT Lab. No. 84677 85678 85679 85680 86234

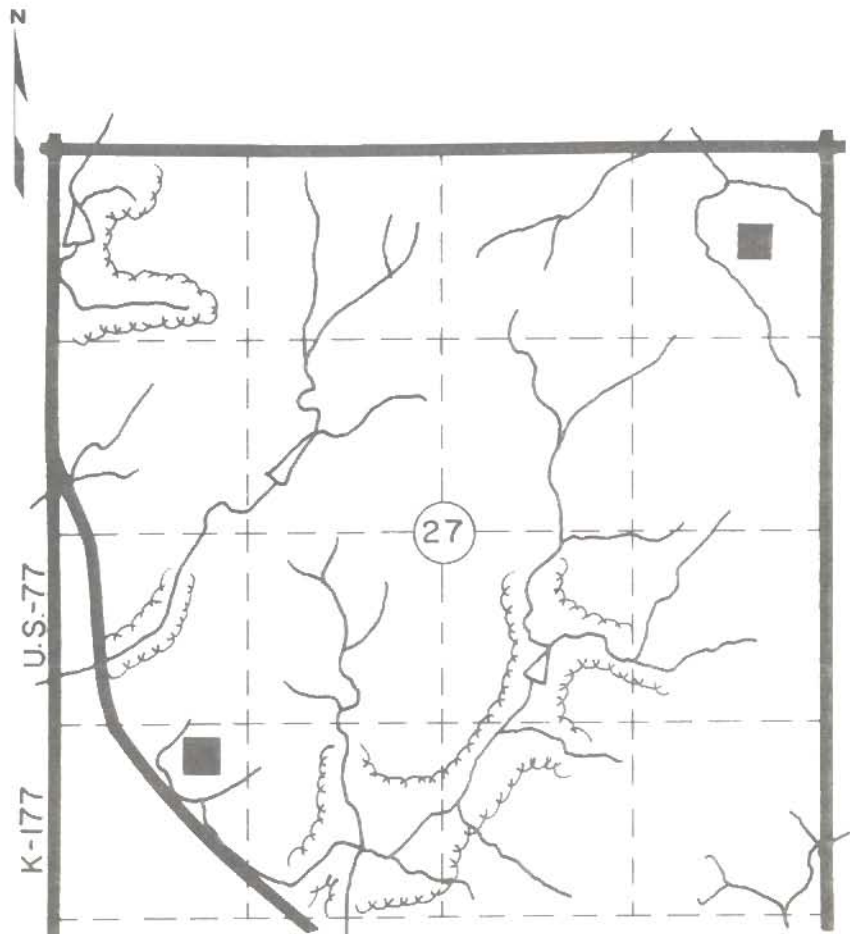
Specific Gravity (Sat.) 2.37⁽¹⁾ 2.37⁽²⁾ 2.11⁽³⁾ 2.13⁽⁴⁾ 2.31⁽⁵⁾

Los Angeles Weagr 37.2B⁽¹⁾ 32.6B⁽²⁾ 45.0B⁽³⁾ 39.0B⁽⁴⁾ 37.0B⁽⁵⁾

Absorption 6.00⁽¹⁾ 5.70⁽²⁾ 8.10⁽³⁾ 7.40⁽⁴⁾ 6.93⁽⁵⁾ Soundness 0.95⁽¹⁾ 0.95⁽²⁾ 0.93⁽³⁾ 0.98⁽⁴⁾ 0.92⁽⁵⁾

Wt. Cu. Ft. _____ Str. Ratio _____

Remarks KDOT Materials Department Site No. 81-20



Scale: 1 Inch = 1/4 Mile

42

MATERIAL SITE DATA FORM

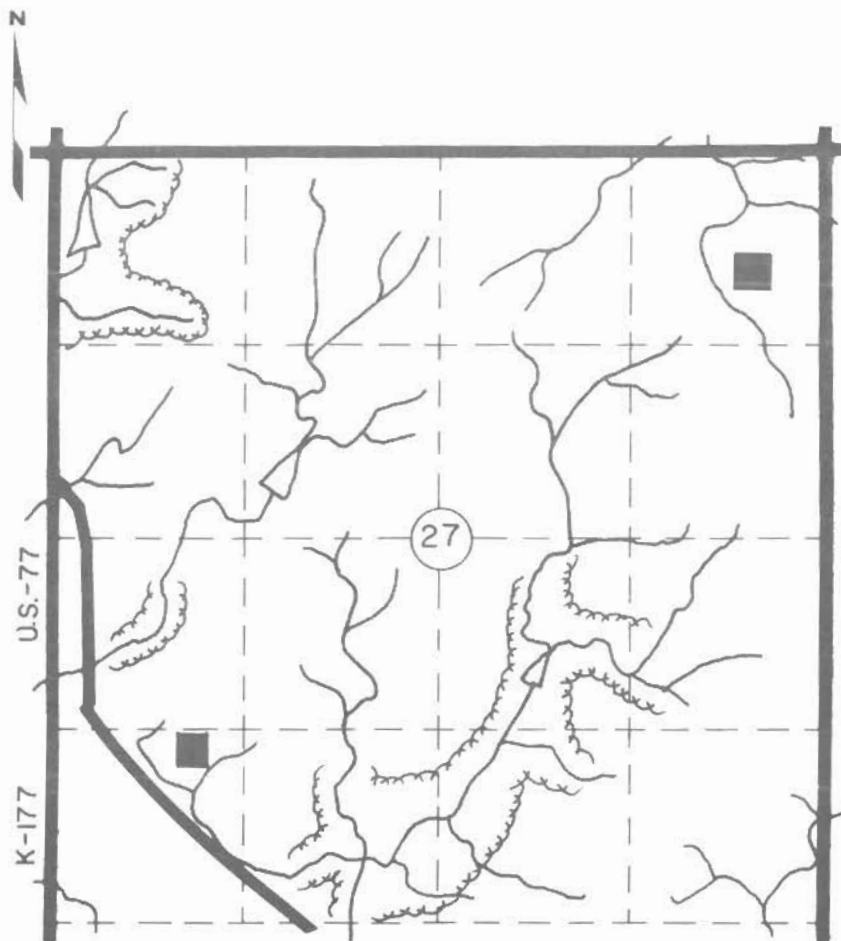
Site No. LS+13
Pdt Date October, 1977
 Material Limestone County Riley
 Location NE 1/4 NE 1/4 Sec. 27 Twp. 8S Range 6E
 Owner Lloyd Woodworth Route 4 Manhattan, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate VI
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To KDOT Lab. No. 24342
 Specific Gravity (Sat.) (A) 2.43 (B) 2.43 (C) 2.43 (Dry) (A) 2.34 (B) 2.33 (C) 2.32
 Los Angeles Wear (A) (B) (C)
 Absorption 4.15 4.14 4.33 Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. 81-38



43

MATERIAL SITE DATA FORM

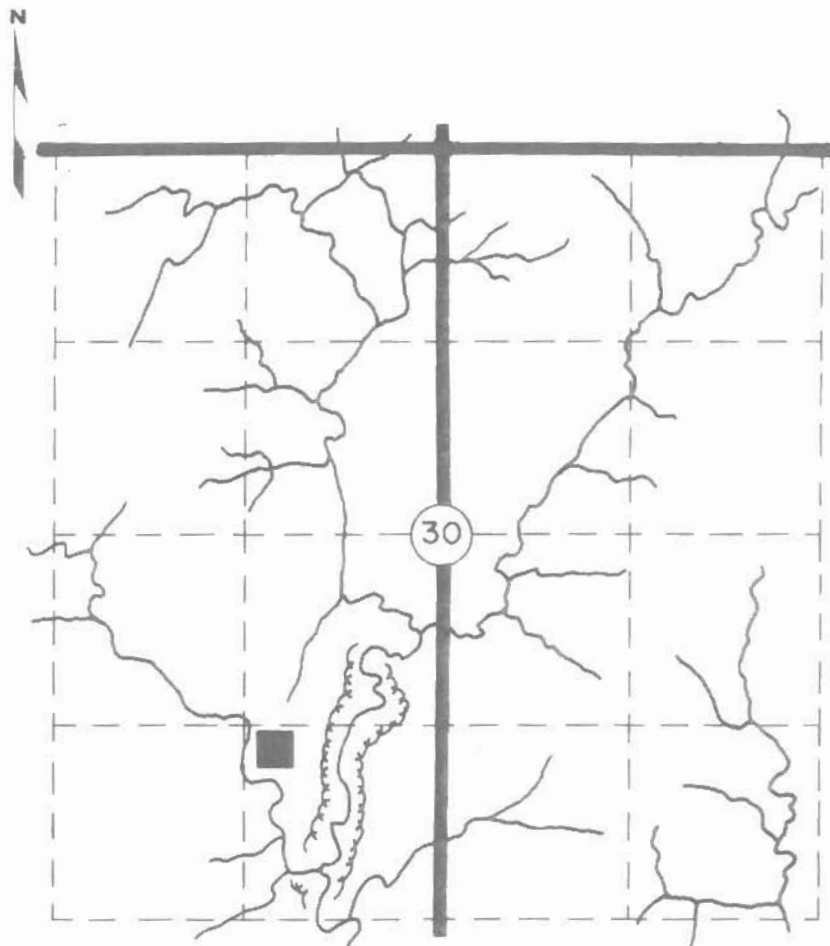
Site No. LS+14
Pdt Date October, 1977
 Material Limestone County Riley
 Location SW¹/₄ Sec. 30 Twp. 9S Range 5E
 Owner U.S. Government
 Nature of Deposit Dry name address
 Accessibility Fair Site Located on Plate VII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|----|---|-----|---|---|----|----|----|-----|--|----------|------|------|------|
| | | | | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. Riley #10



Scale: 1 inch = ¼ Mile

44

MATERIAL SITE DATA FORM

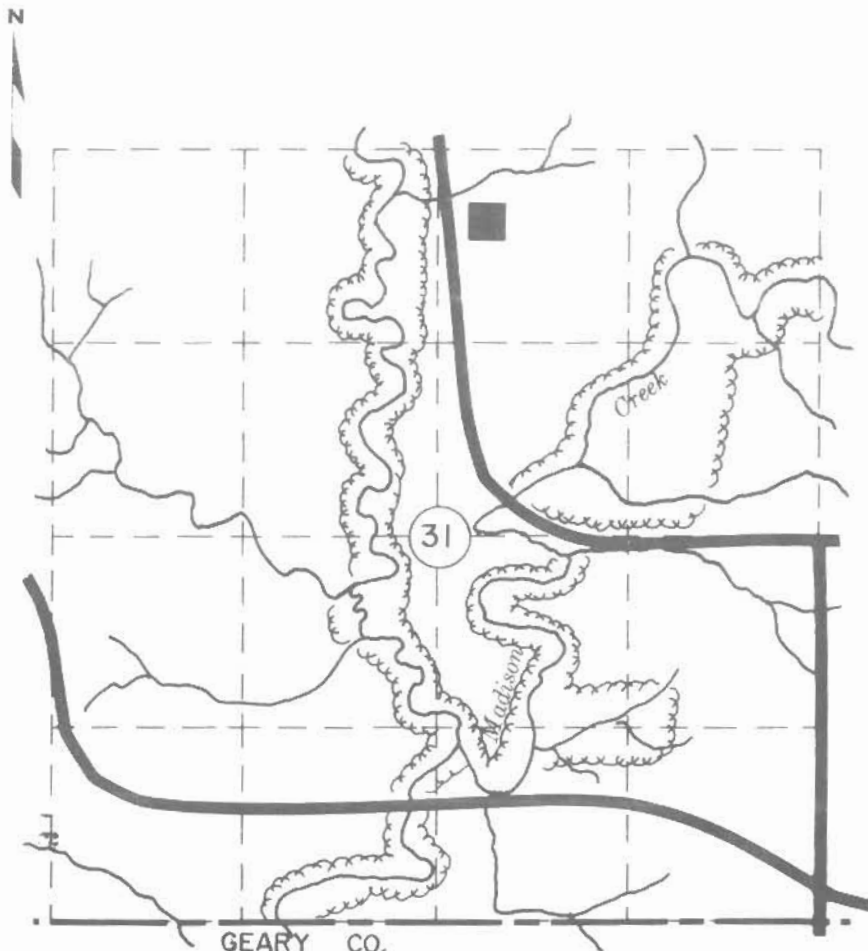
Site No. LS+15
Pdt Date October, 1977
 Material Limestone County Riley
 Location NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 31 Twp. 9S Range 5E
 Owner U.S. Government
 Nature of Deposit Dry Accessibility Fair Site Located on Plate VII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|----|---|-----|---|---|----|----|----|-----|----------|------|------|------|
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To KDOT Lab No. 76268
 Specific Gravity (Sat.) 2.61 (Dry) _____
 Los Angeles Wear 25.8 (A)
 Absorption 2.16 Soundness 0.96
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. 81-16



Scale: 1 Inch = ¼ Mile

45

MATERIAL SITE DATA FORM

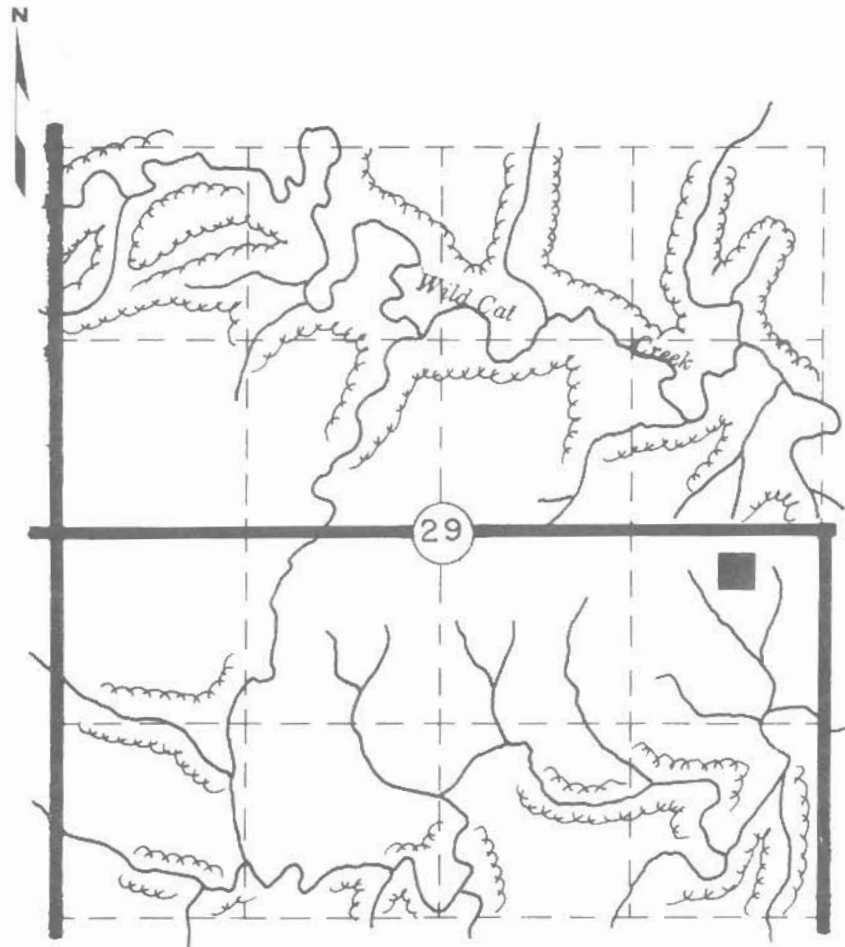
Site No. LS+16
Pdt Date October, 1977
 Material Limestone County Riley
 Location SE 1/4 Sec. 29 Twp. 9S Range 6E
 Owner U.S. Government
 Nature of Deposit Dry name address
 Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|-----|-----|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To KDOT Lab. No. 23129 23129 23129
 (A) (B) (C) (A) (B) (C)
 Specific Gravity (Sat.) 2.68 2.65 2.79 (Dry) 2.47 2.47 2.47
 Los Angeles Weir (A) (B) (C)
 Absorption 2.54 2.54 2.54 Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOF Materials Department Site No. 81-37



Scale: 1 Inch = 1/4 Mile

46

MATERIAL SITE DATA FORM

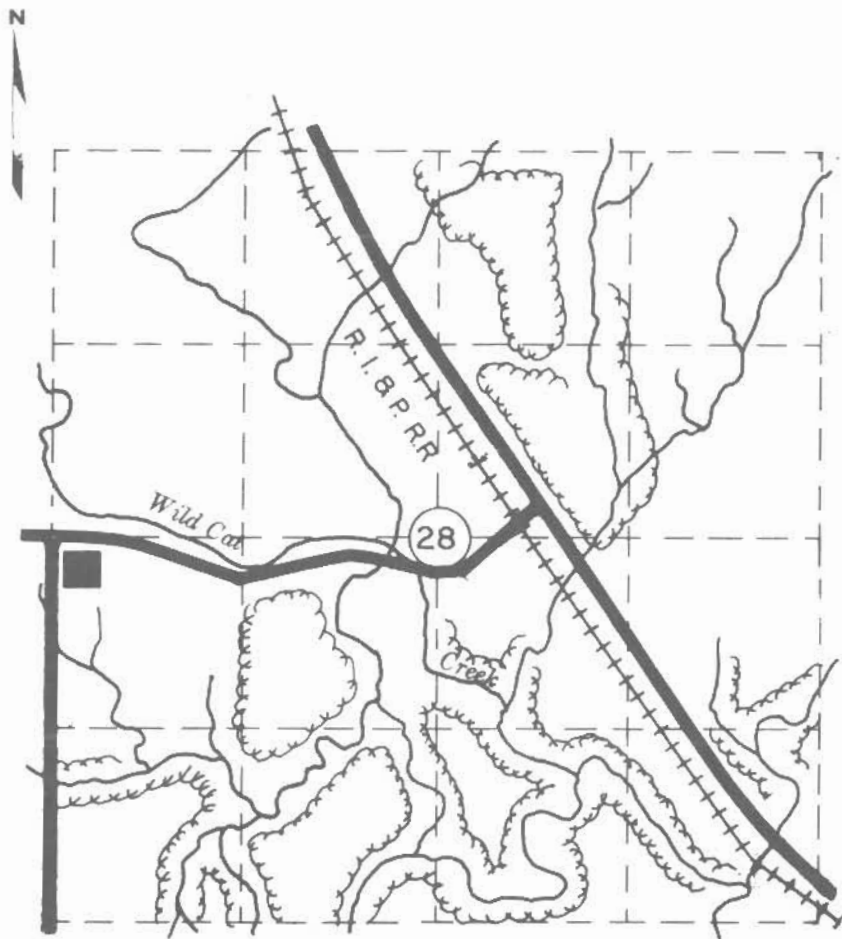
Site No. LS-17
Pdt Date October, 1977
 Material Limestone County Riley
 Location NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 28 Twp. 9S Range 6E
 Owner U.S. Government
 Nature of Deposit Dry name address
 Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | Wash 200 | G.F. | L.I. | P.I. |
|-----------|----------------------------|----------------------|-------------------|----|---|-----|---|---|----|----|----|-----|--|----------|------|------|------|
| | | | | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To KDOT Lab. No. 49444 49445
 Specific Gravity (Sat.) 2.53 2.44 (Dry)
 Los Angeles Wear 32.3(A) 30.5(A)
 Absorption (1)2.04 (2)2.72 Soundness (1)0.86 (2)0.91
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. 81-1



Scale: 1 Inch = ¼ Mile

MATERIAL SITE DATA FORM

Site No. LS+18
Pdt Date October, 1977
 Material Limestone County Riley
 Location NW $\frac{1}{4}$ Sec. 33 Twp. 9S Range 6E
 Owner U.S. Government
 Nature of Deposit Dry name address
 Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

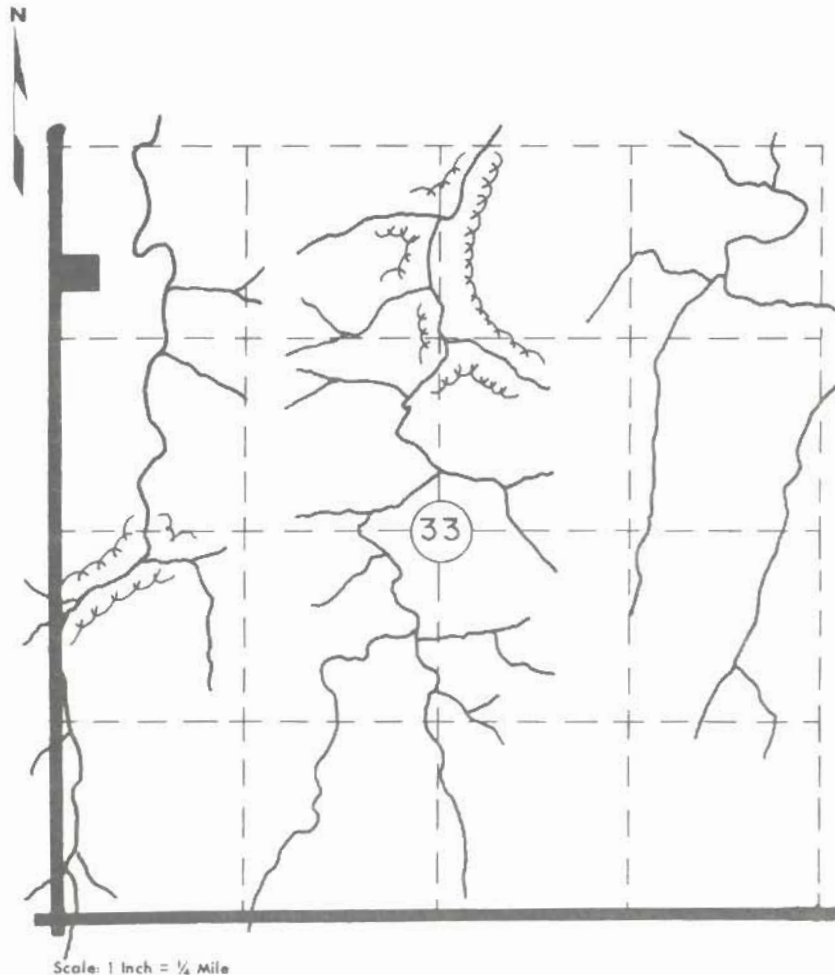
| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|-----|-----|-----|---|---|----|----|----|-----|--|----------|------|------|------|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

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To KDOT Lab. No. 95534

Specific Gravity (Sat.) 2.48 (Dry)
 Los Angeles Wear 28.0 (B)
 Absorption (1) 3.28 Soundness (1) 0.98
 Wt. Cu. Ft. _____ Str. Ratio _____

Remarks KDOT Materials Department Site No. 81-21.
Water Absorption tests on Lab. No. 95534 thru 95537



LS+19

Pdt

Site No. _____ Date October, 1977

Material Limestone County Riley

Location SW 1/4 Sec. 33 Twp. 9S Range 6E

Owner U.S. Government
name _____ address _____

Nature of Deposit Dry Accessibility Good Site Located on Plate VIII

Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Depth of Material | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|-------------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|------|------|
| | | | | 1 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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49

CORRELATION DATA

Geological Age Permian

Geological Source Doyle Shale Fm. Towanda Limestone Mbr.

Material Similar To KDOT Lab. No. 15625 15788

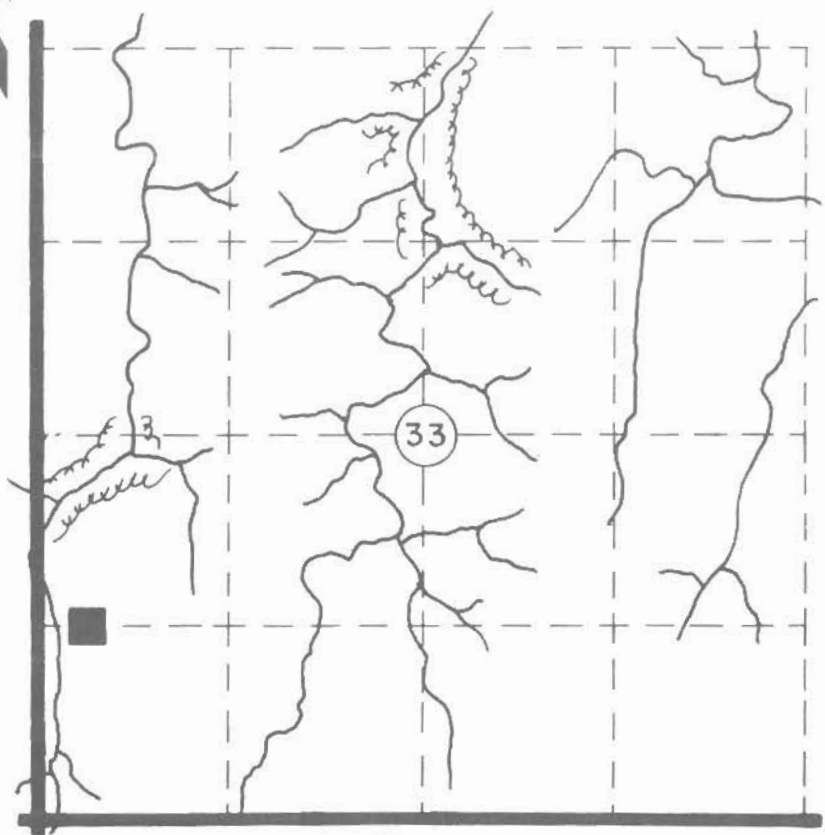
Specific Gravity (Sat.) 2.44 2.46 (Dry) 2.35 2.37

Los Angeles Wear 31.2

Absorption 3.87 3.71 Soundness 0.98

Wt. Cu. Ft. _____ Str. Ratio _____

Remarks KDOT Materials Department Site No. 81-25



Scale: 1 inch = 1/2 Mile

MATERIAL SITE DATA FORM

Site No. LS+20
Pbc Date October, 1977
 Material Limestone County Riley
 Location NE 1/4 Sec. 22 Twp. 10S Range 7E
 Owner Irene Abramowitz 1016 Baltimore, K.C.
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

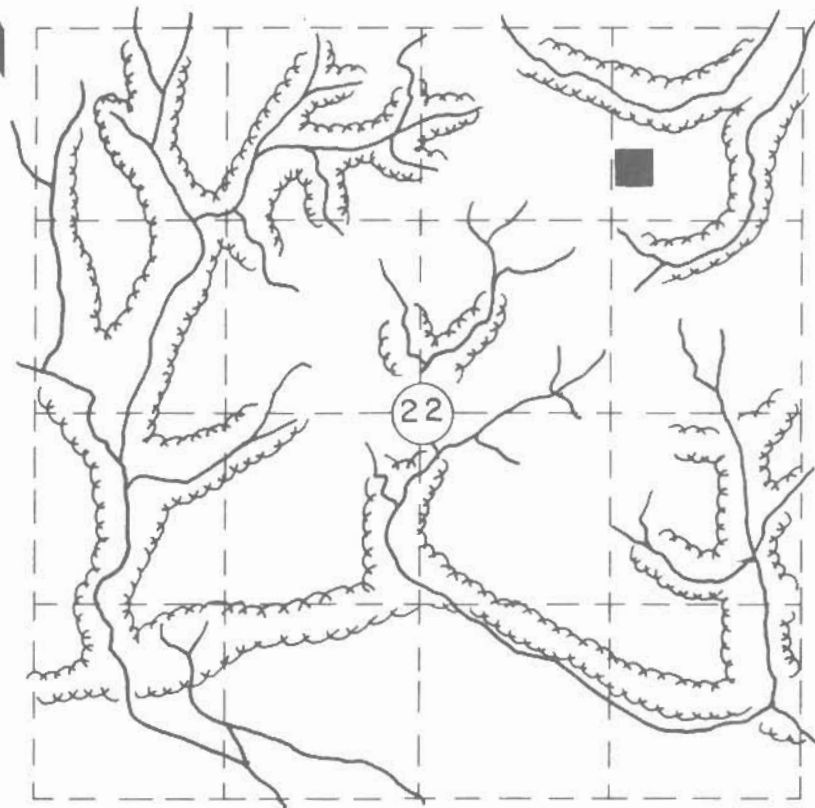
| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|-------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|------|------|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

Geological Age Permian
 Geological Source Beattie Ls. Fm. Cottonwood Limestone Mbr.
 Material Similar To KDOT Lab. No. 92218

Specific Gravity (Sat.) 2.38 (Dry)
 Los Angeles Wear 44.6 (B)
 Absorption (1) 6.53 Soundness (1) 0.92
 Wt. Cu. Ft. _____ Str. Ratio _____

Remarks KDOT Materials Department Site # _____



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

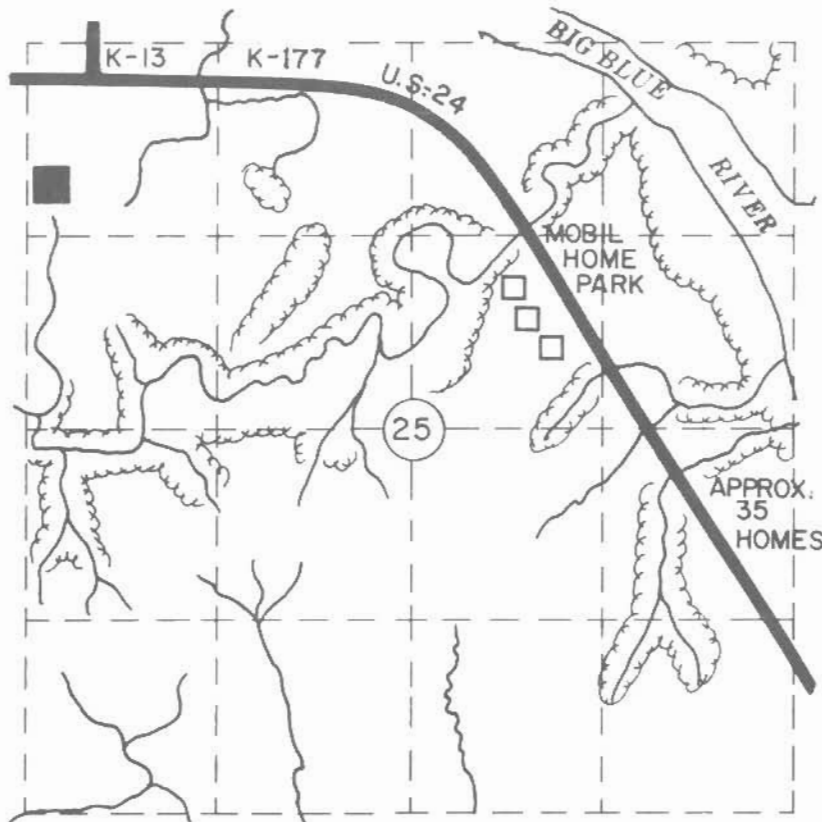
Site No. LS+21
Pdt Date October, 1977
 Material Limestone County Riley
 Location NW 1/4 Sec. 25 Twp. 9S Range 7E
 Owner Robert B. Irvine, Jr., ETAL 745 College Hts. Cir
 name address Manhattan
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To KDOT Lab. No. 38039
 Specific Gravity (Sat.) 2.38 (Dry) 2.25
 Los Angeles Wear 33.4 (B)
 Absorption 5.93 Soundness 0.89
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-42



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

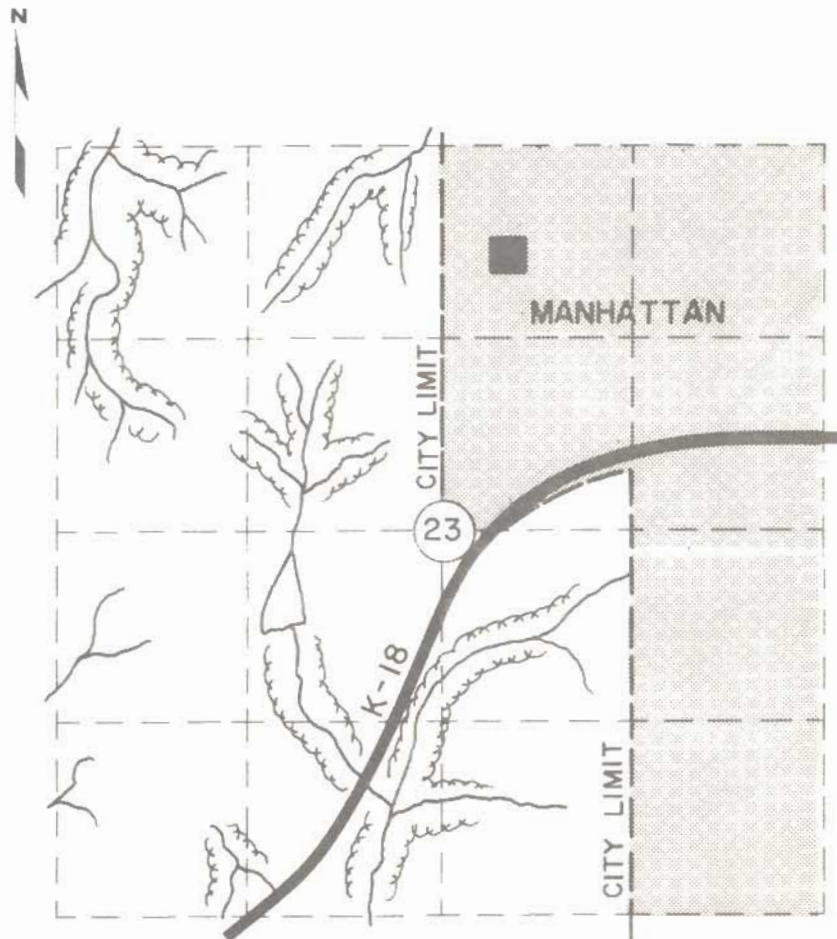
Site No. LS+22
Pbc Date October, 1977
 Material Limestone County Riley
 Location NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 23 Twp. 10S Range 7E
 Owner City of Manhattan Manhattan, KS
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Penetration | | | | | | | | | | | Wash 200 | G+ | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|-------------|-----|-----|---|---|----|----|----|-----|--|--|----------|----|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Beattie Ls. Fm. Cottonwood Limestone Mbr.
 Material Similar To KDOT Lab. No. 3069
 Specific Gravity (Sat.) 2.39 (Dry) 2.23
 Los Angeles Wear 47.8
 Absorption 6.95 Soundness 0.77
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-28



Scale: 1 inch = 1/4 Mile

MATERIAL SITE DATA FORM

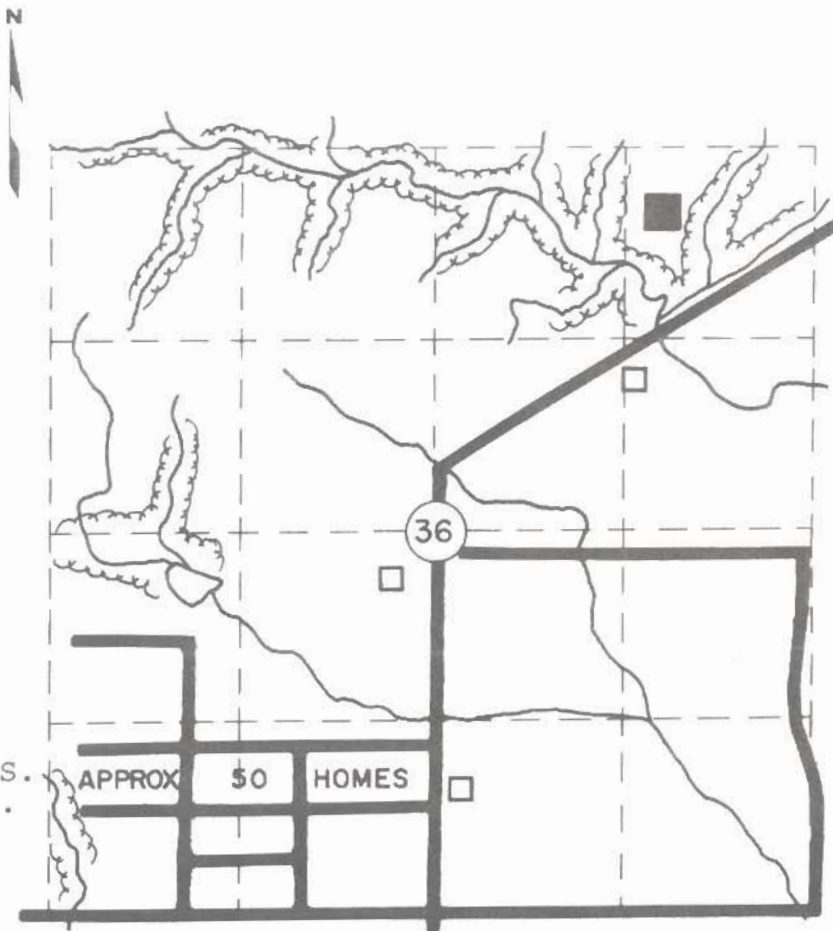
Site No. LS+23
Pbc & Pqn Date October, 1977
 Material Limestone County Riley
 Location N½ NE¼ Sec. 36 Twp. 9S Range 7E
 Owner Alta S. & Christine C. Hepler Route 4 Manhattan,
 name address KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Grain Size | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|------------|---|-----|---|---|----|----|----|-----|--|--|----------|------|------|------|
| | | | | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Beattie & Grenola Ls. Fm. Cottonwood & Neva Ls. Mbr.
 Material Similar To KDOT Lab. No. 96543
 Specific Gravity (Sat.) 2.51 (Dry) _____
 Los Angeles Wear 33.6 (B)
 Absorption 3.54 Soundness 0.97
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Beattie & Grenola Ls. Fm.
KDOT Materials Dept. Site No. 81-18



Scale: 1 Inch = ¼ Mile

53

MATERIAL SITE DATA FORM

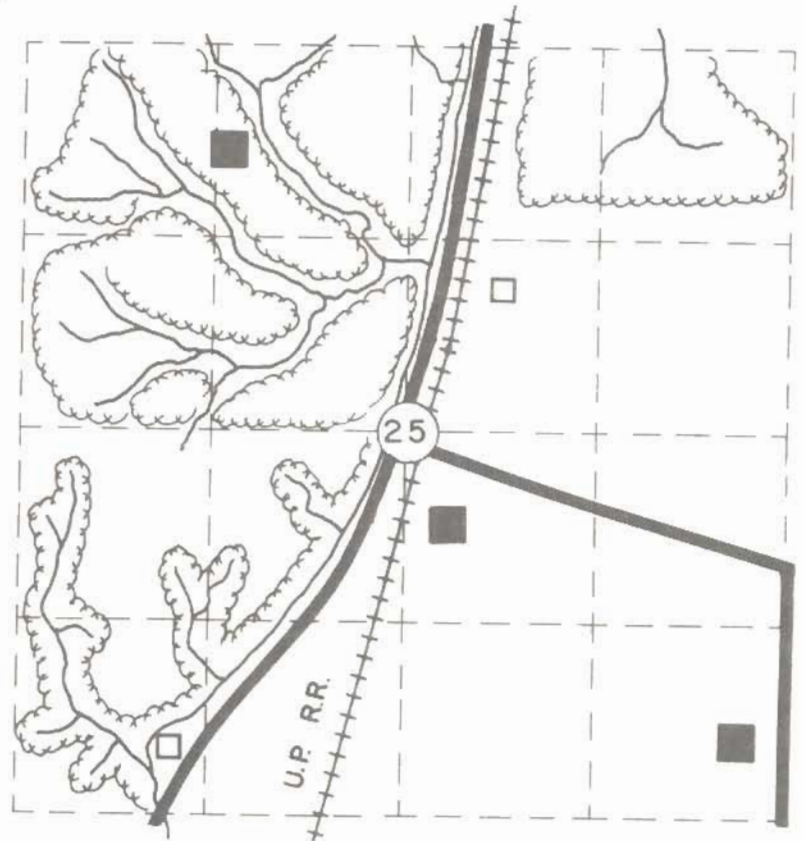
Site No. LS+24
Pqn Date October, 1977
 Material Limestone County Riley
 Location N½ NW¼ Sec. 25 Twp. 10S Range 7E
 Owner Elsie R. Deam Route 1 Manhattan, KS
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|---|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
| | | | | Lab No. AA3742 | | | | | | | | | | | Wash. | | 21 | 4 |
| | | | | | | | | | | | | | | | Dry | | 20 | 2 |
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CORRELATION DATA

Geological Age Permian
 Geological Source Grenola Ls. Fm. Neva Limestone Mbr.
 Material Similar To KDOT Lab. No. (1)50150 (2)50151 (3)79577
 Specific Gravity (Sat.) (1)2.49 (2)2.54 (3)2.51
(Dry)
 Los Angeles Wear (1)32.2 (A) (2)30.6 (A) (3)36.5 (B)
 Absorption (1)3.09 (2)2.20 (3)4.68 Southanes (1)0.91 (2)0.97 (3)0.87
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-9



Scale: 1 Inch = ¼ Mile

MATERIAL SITE DATA FORM

Site No. FS+25
Qal Date October, 1977
 Material Fine Sand County Riley
 Location NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 25 Twp. 10S Range 7E
 Owner Wilhelmina Perkins 2300 Claflin Rd. Manhattan, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

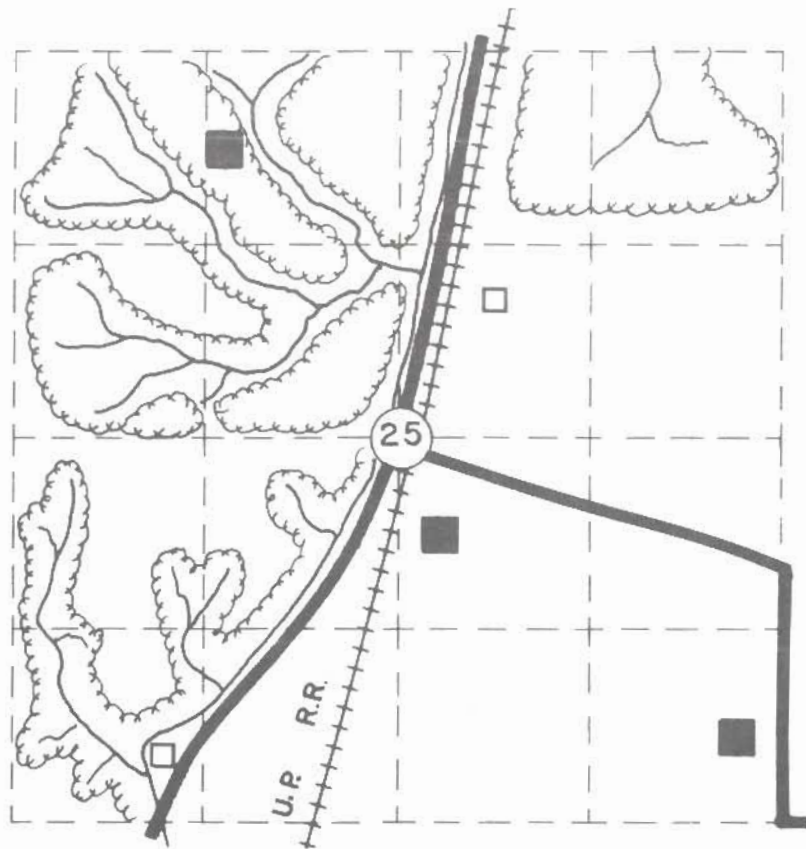
EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|-----|-----|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To KDOT Lab. No. 23273
 Specific Gravity (Sat.) 2.59 (Dry)
 Los Angeles Wear _____
 Absorption 0.6 Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-40

55



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

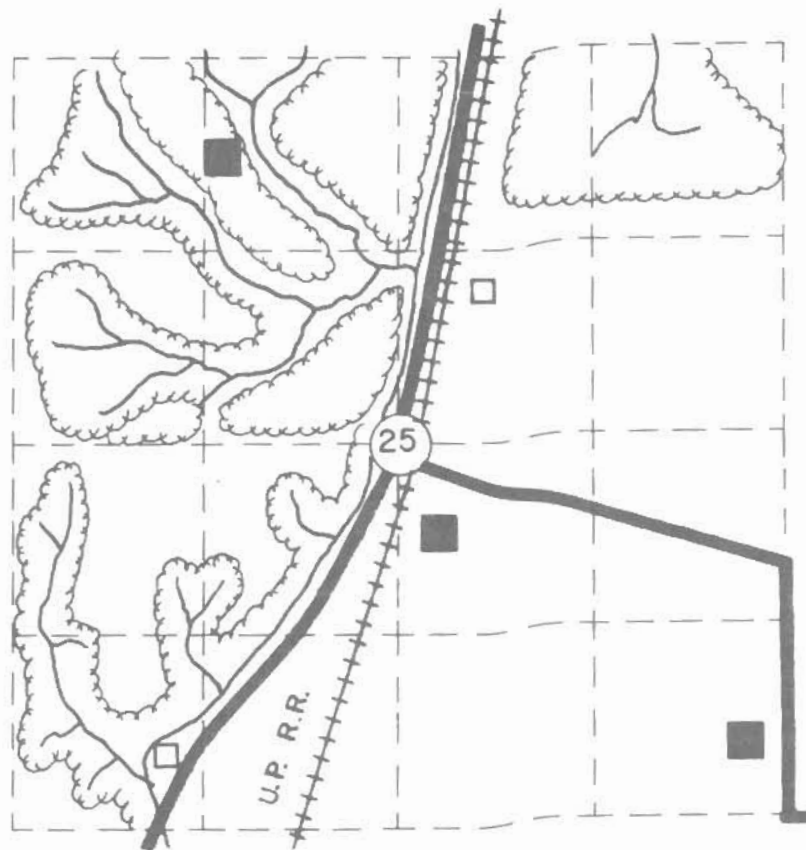
Site No. FS+26
Qal Date October, 1977
 Material Fine Sand County Riley
 Location SE 1/4 Sec. 25 Twp. 10S Range 7E
 Owner Wilhelmina Perkins 2300 Claflin Rd. Manhattan, KS
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To KDOT Lab. No. 65.4272
 Specific Gravity (Sat.) 2.61 (Dry)
 Los Angeles Wear _____
 Absorption 0.30 Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. No. 81-45



Scale: 1 Inch = 1/4 Mile

56

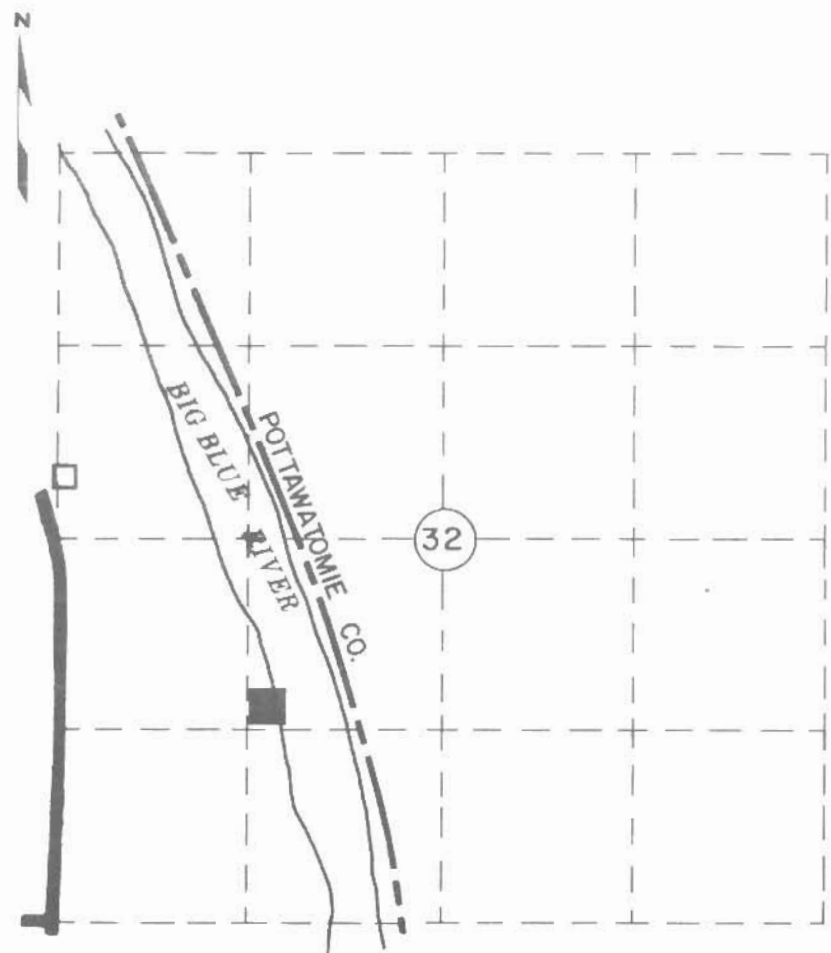
Site No. SG+27
Qal Date October, 1977
 Material Sand & Gravel County Riley
 Location NE 1/4, SW 1/4 Sec. 32 Twp. 9S Range 8E
 Owner Paul B. Irvine Route 5 Manhattan, KS
name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To KDOT Lab. No. 96545
 Specific Gravity (Sat.) 2.59 (Dry) _____
 Los Angeles Wear 37.3 (D)
 Absorption 0.5 Soundness 0.97
 Wt. Cu. Ft. 108.2 Str. Ratio 1 Da. 1.47 3 Da. 1.27
 Remarks KDOT Materials Dept. Site No. 81-23



57

MATERIAL SITE DATA FORM

Site No. SG+28
Qa1 Date October, 1977
 Material Sand & Gravel County Riley
 Location SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 30 Twp. 10S Range 8E
 Owner Robert Lake Route 2 Manhattan, KS
name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To KDOT Lab. No. 96544

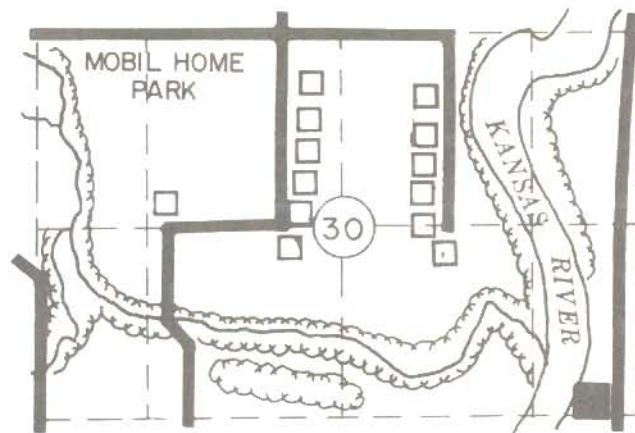
Specific Gravity (Sat.) 2.62 (Dry) _____

Los Angeles Wear _____

Absorption 0.40 Soundness 0.97

Wt. Cu. Ft. 114.0 Str. Ratio 1 da.-145 3 da.-1.38

Remarks KDOT Materials Dept. Site No. 81-15



SCALE: 1 INCH = 1/2 MILE

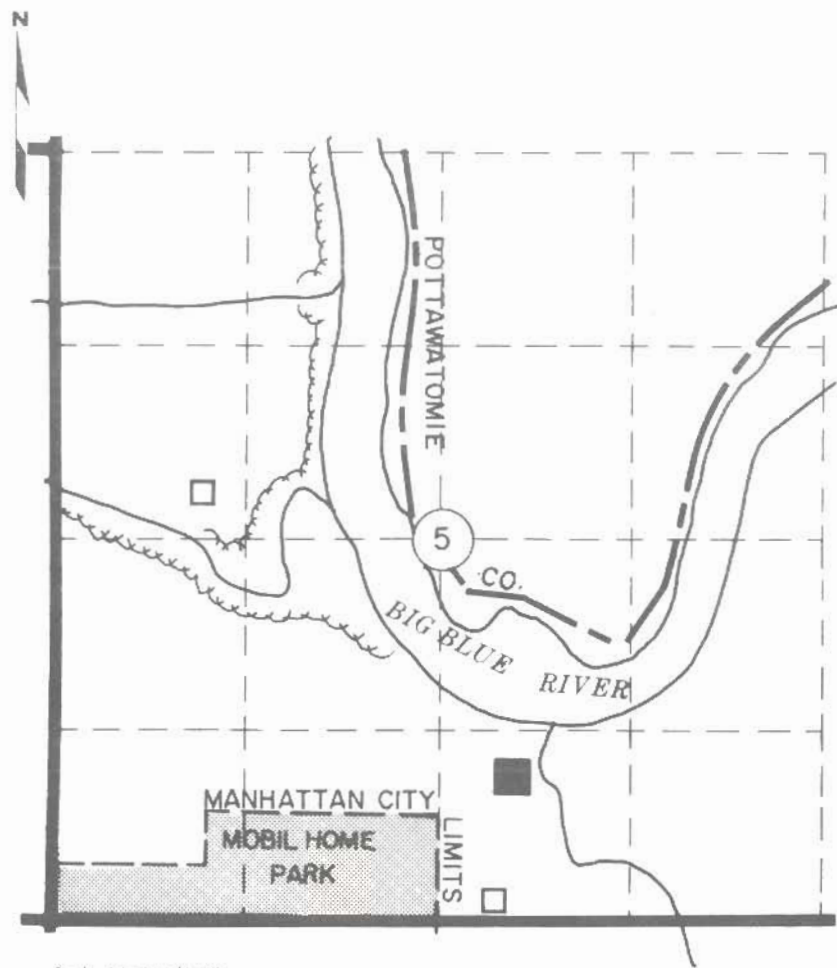
Site No. SG+29
Qal Date October, 1977
 Material Sand & Gravel County Riley
 Location S½ Sec 5 Twp. 10S Range 8E
 Owner Maude E. Walters 1917 Humboldt Manhattan, KS
 Nature of Deposit Wet Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Overburden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|---------------------|-------------------|----------------|-----|-----|----|----|----|----|----|-----|----|------|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
| | | | | 0 | 3 | 21 | 60 | 90 | 97 | 99 | 99 | 99 | 99 | 0.95 | 4.69 | | | |
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CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To KDOT 14860
 Specific Gravity (Sat.) 2.61 (Dry) _____
 Los Angeles Wear 34.4
 Absorption 0.90 Soundness 0.97
 Wt. Cu. Ft. 107.30 Str. Ratio 1 da.-1.30 3 da.-1.26
 Remarks KDOT Materials Dept. Site 81-24
Grading D



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

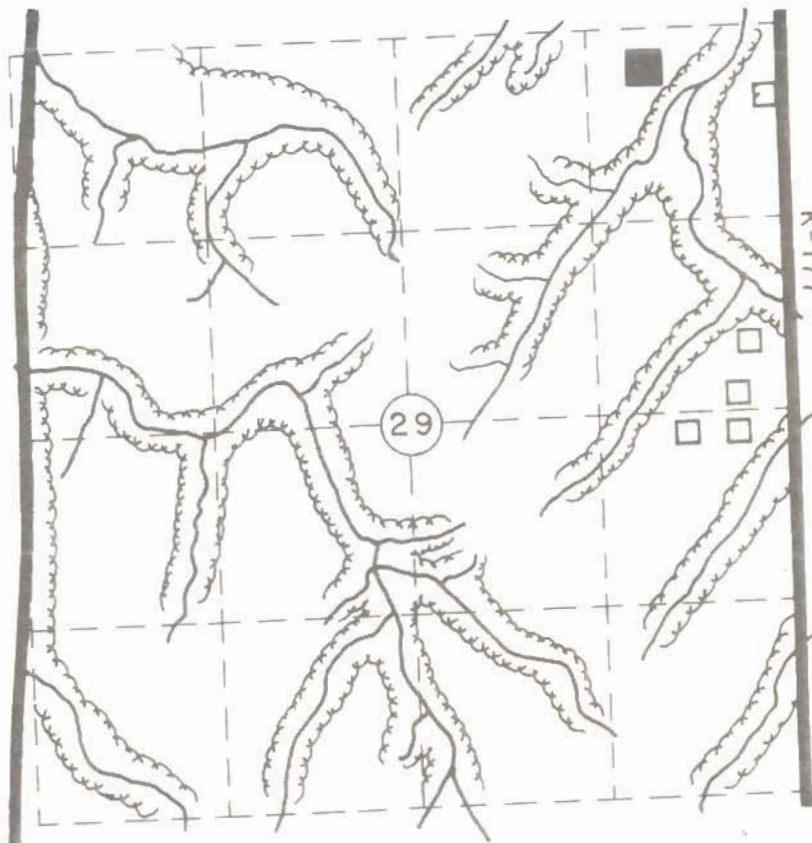
Site No. LS+30 Date October, 1977
Pgn
 Material Limestone County Riley
 Location NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 29 Twp. 10S Range 8E
 Owner Stonehaven, Inc. Winifred Miller Rt. 1 Manhattan
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX KS
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | GF | LL | PI | | | |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|--|--|----------|----|----|----|--|----|---|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | | | | |
| 1 | LS | 0.5 | 5.0 | | | | | | | | | | | | | | | | | 20 | 7 |
| 2 | LS | 3.5 | 5.0 | | | | | | | | | | | | | | | | | 18 | 5 |
| 3 | LS | 0.5 | 5.0 | | | | | | | | | | | | | | | | | | |
| 4 | LS | 5.0 | 5.0 | | | | | | | | | | | | | | | | | | |
| 5 | LS | 5.0 | 5.0 | | | | | | | | | | | | | | | | | | |

CORRELATION DATA

Geological Age Permian
 Geological Source Grenola Ls. Fm. Neva Limestone Mbr.
 Material Similar To KDOT Lab. No. (1)49446 (2)49447 (3)49448
(4)49449 (5)49450
 Specific Gravity (Sat.) (1)2.50 (2)2.44 (3)0.82 (4)2.40 (5)2.49
 Los Angeles Wear (1)32.3 A (2)37.2A (3)33.7A (4)38.5A (5)30.9A
 Absorption (1)3.15 (2)4.12 (3)3.96 Soundness (1)0.88 (2)0.47 (3)0.82
(4)4.88 (5)2.84 (4)0.83 (5)0.89
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-8



Scale: 1 Inch = 1/4 Mile

09

MATERIAL SITE DATA FORM

Site No. LS+50
Pzt Date October, 1977
 Material Limestone County Riley
 Location S $\frac{1}{2}$ Sec. 28 Twp. 10S Range 9E
 Owner Forrest A. Moore Route 3 Manhattan, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

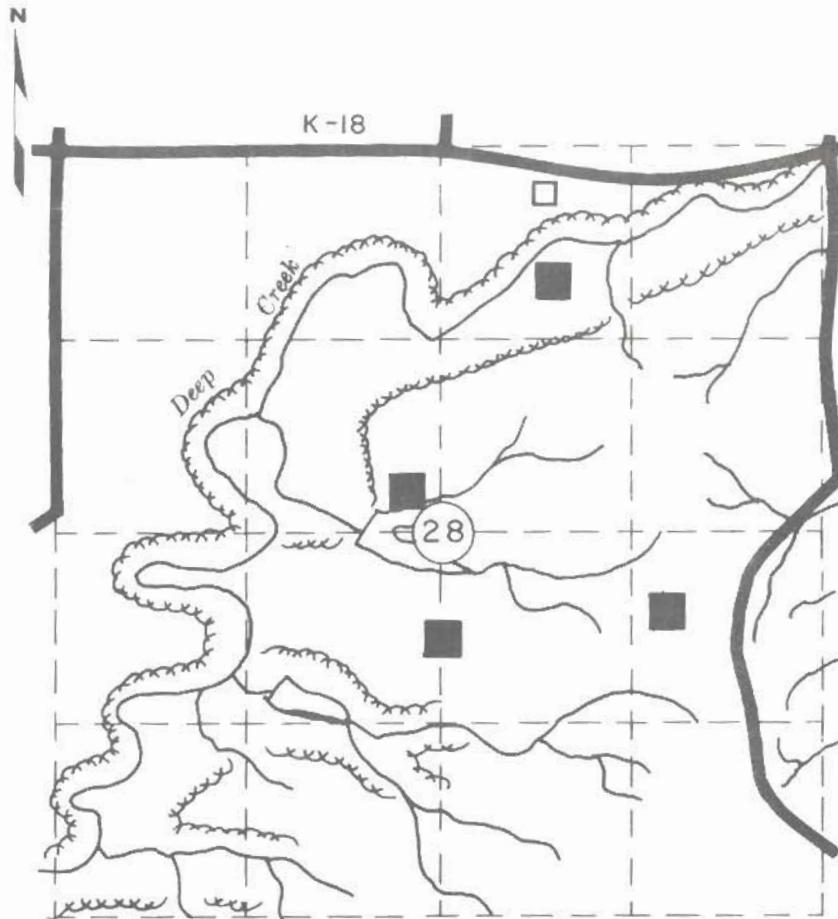
EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|------|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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61

CORRELATION DATA

Geological Age Pennsylvanian
 Geological Source Zeandale Ls. Fm. Tarkio Limestone Mr.
 Material Similar To KDOT Lab No. 57236 57237 57238
 Specific Gravity (Sat) 2.61 2.56 2.63 (Dry) _____
 Los Angeles Wear 31.5 A 35.1 A 29.6 A
 Absorption 1.62 2.95 1.04 Soundness 0.97 0.89 0.93
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-11



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

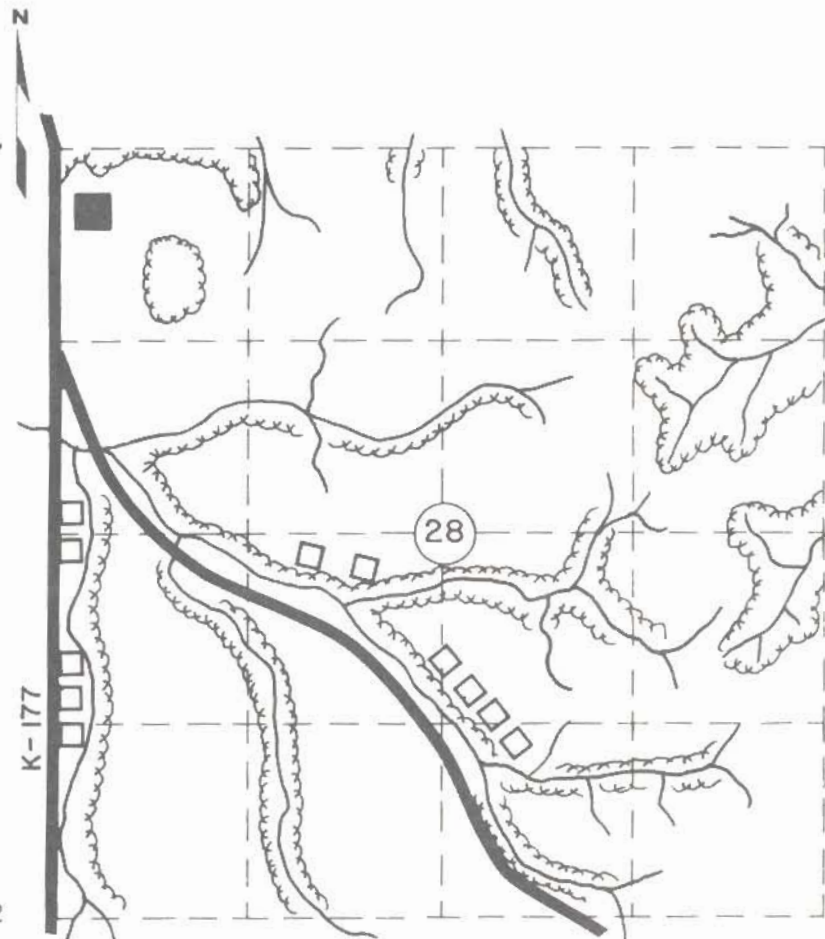
Site No. LS+32
Pgn Date October, 1977
 Material Limestone County Riley
 Location NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 28 Twp. 10S Range 8E
 Owner Stonehaven, Inc. Winifred Miller Rt. 1 Manhattan,
name address KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

Geological Age Permian
 Geological Source Grenola Ls. Fm. Neva Limestone Mbr.
 Material Similar To KDOT Lab. No. 65-854 65-855
 Specific Gravity (Sat.) 2.51 2.51A 2.51B 2.51C 2.41 2.42 2.42 2.42
(Dry)
 Los Angeles Wear 30.5 (B)
 Absorption 3.93 3.71 3.83 3.77 Soundness 0.89
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-44



Site No. SG+33
Qal Date October, 1977
 Material Sand & Gravel County Riley
 Location NE 1/4 Sec. 16 Twp. 10S Range 8E
 Owner C.K. Dehydrating Box 58 Salina, KS
 Nature of Deposit Wet Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

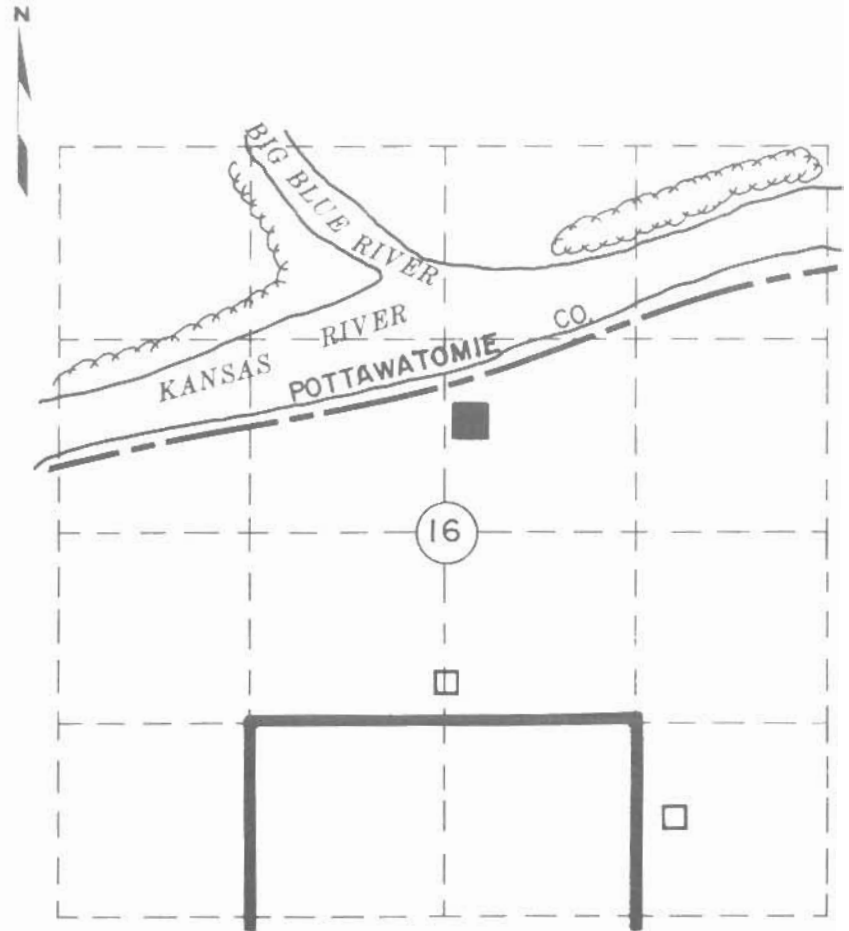
EXPLORATION DATA

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

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To KDOT Lab. No. 31914
 Specific Gravity (Sat.) 2.50 (Dry)
 Los Angeles Wear 27.4
 Absorption 3.43 Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-41
Grading A

63



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

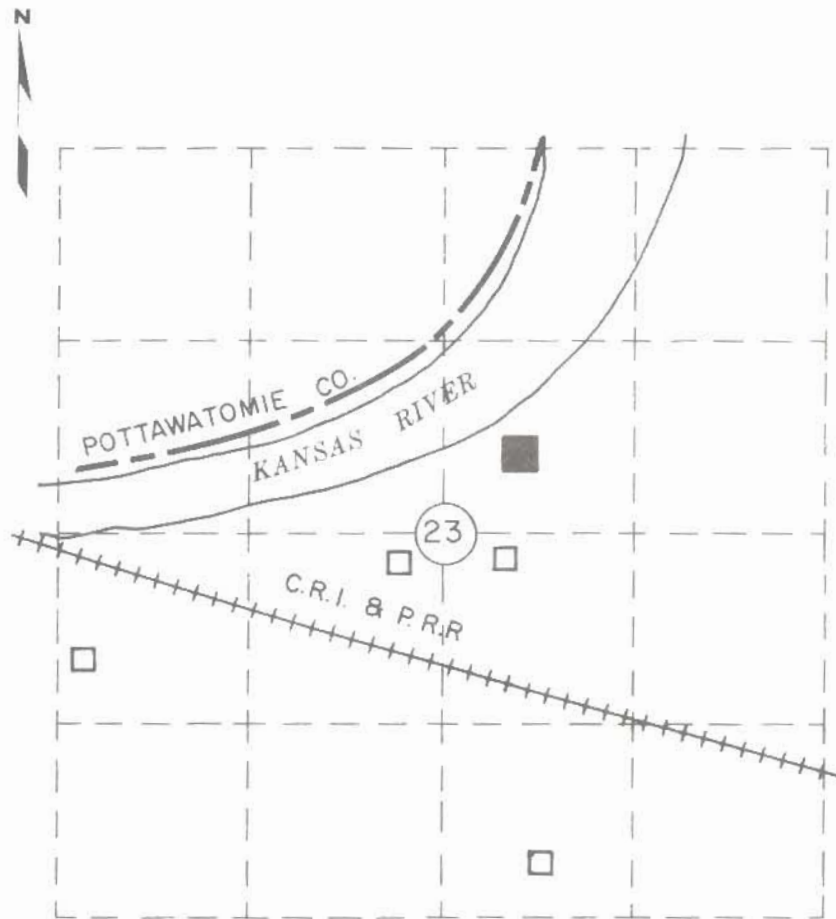
Site No. SG+34
Qal Date October, 1977
 Material Sand & Gravel County Riley
 Location NE 1/4 Sec. 23 Twp. 10S Range 8E
 Owner C.K. Processing Co., Inc. Box 877 Salina, KS
 name address
 Nature of Deposit Wet Accessibility Fair Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|----|----|----|----|----|-----|------|------|--|----------|------|----|------|
| | | | | 1/2 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | | |
| | | | | 0 | 3 | 12 | 27 | 42 | 65 | 92 | 98 | 0.56 | 3.39 | | | | | |
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CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To KDOT Lab. No. 15548
 Specific Gravity (Sat.) 2.61 (Dry)
 Los Angeles Wear 36.8
 Absorption 0.5 Soundness 0.98
 Wt. Cu. Ft. 115.68 Str. Ratio 1 da.-1.53 3 da.-140
 Remarks KDOT Materials Dept. Site No. 81-32
Grading D Color Test - Clear



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+35
Pzt Date October, 1977
 Material Limestone County Riley
 Location W $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 29 Twp. 10S Range 9E
 Owner Cletus & Carl Umscheid 230 Colorado Manhattan, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

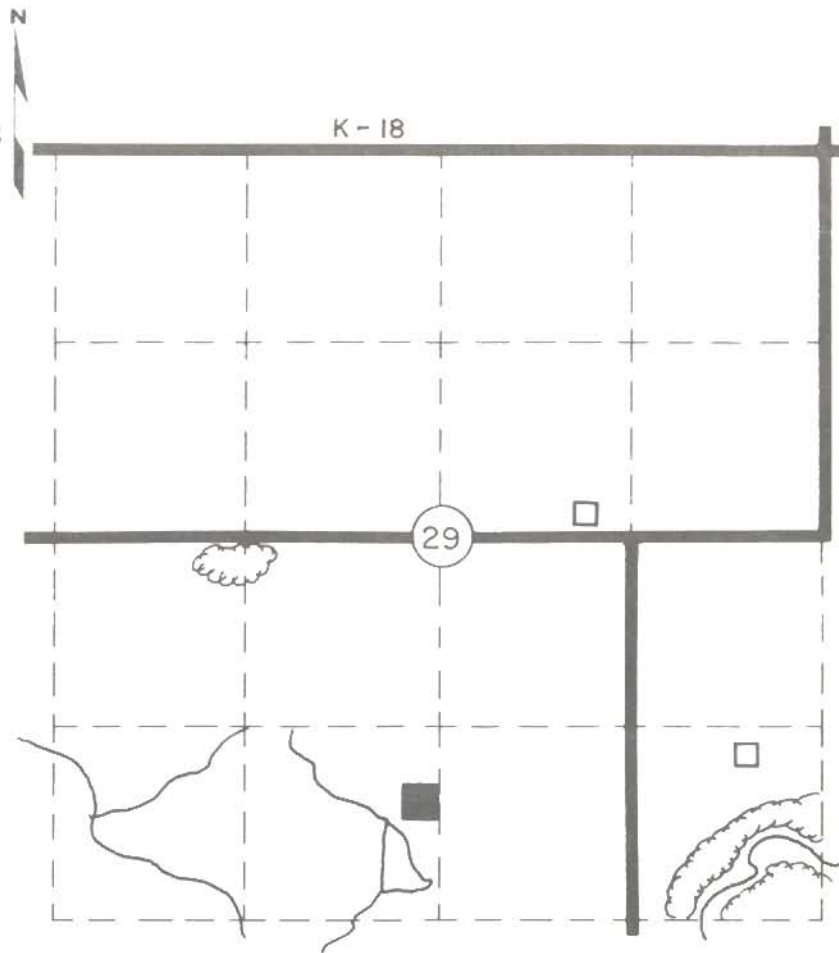
EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|-----|-----|-----|---|---|----|----|----|-----|--|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | |
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69

CORRELATION DATA

Geological Age Pennsylvanian
 Geological Source Zeandale Ls. Fm. Tarkio Limestone Mbr.
 Material Similar To KDOT Lab. No. 65-4273 65-2826 65-2825
 Specific Gravity (Sat.) 2.54 (A) 2.61 (B) 2.61 (C) 2.60 (Dry) 2.60 2.46 2.55 2.55 2.56
 Los Angeles Wear 28.3 (B)
 Absorption 3.31 2.17 2.14 1.92 Soundness 2.21 0.98
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-43



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+36
Pzt Date October, 1977
 Material Limestone County Riley
 Location SE $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 28 Twp. 10S Range 9E
 Owner Forrest A. Moore Rt. #3 Manhattan, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

Geological Age Pennsylvanian
 Geological Source Zeandale Ls. Fm. Tarkio Limestone Mbr.
 Material Similar To KDOT Lab. No. 67-244

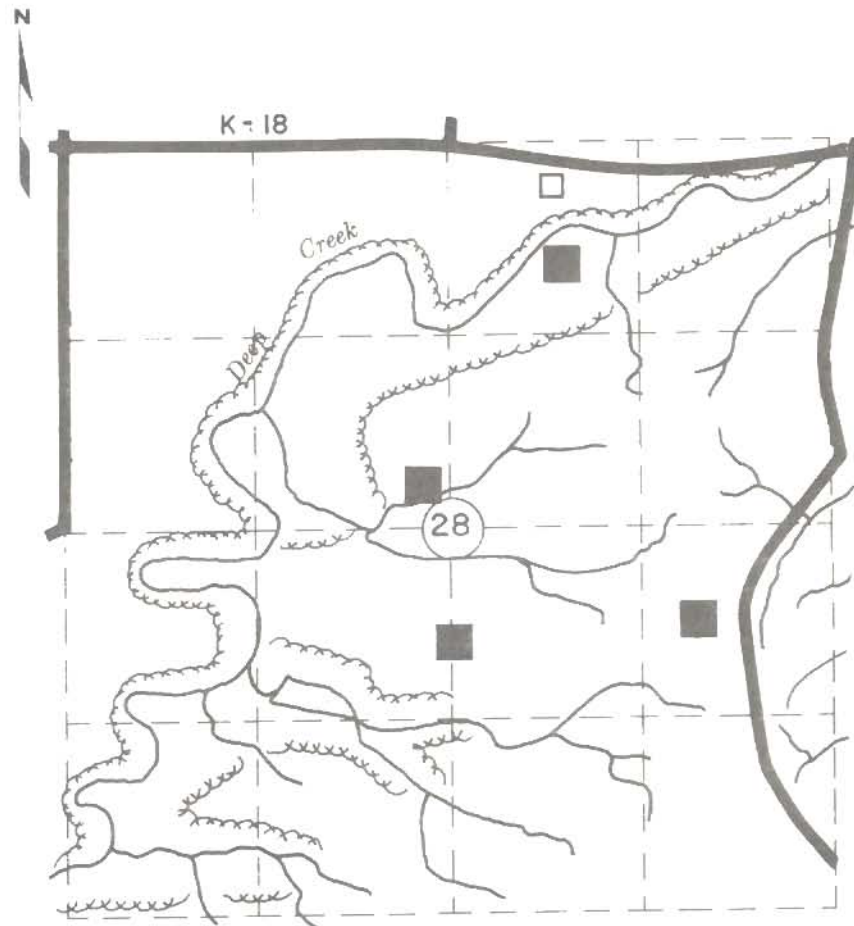
Specific Gravity (Sat) 2.62 (Dry) 2.56

Los Angeles Wear _____

Absorption 2.32 Soundness _____

Wt. Cu. Ft. _____ Str. Ratio _____

Remarks KDOT Materials Dept. Site No. 81-47



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

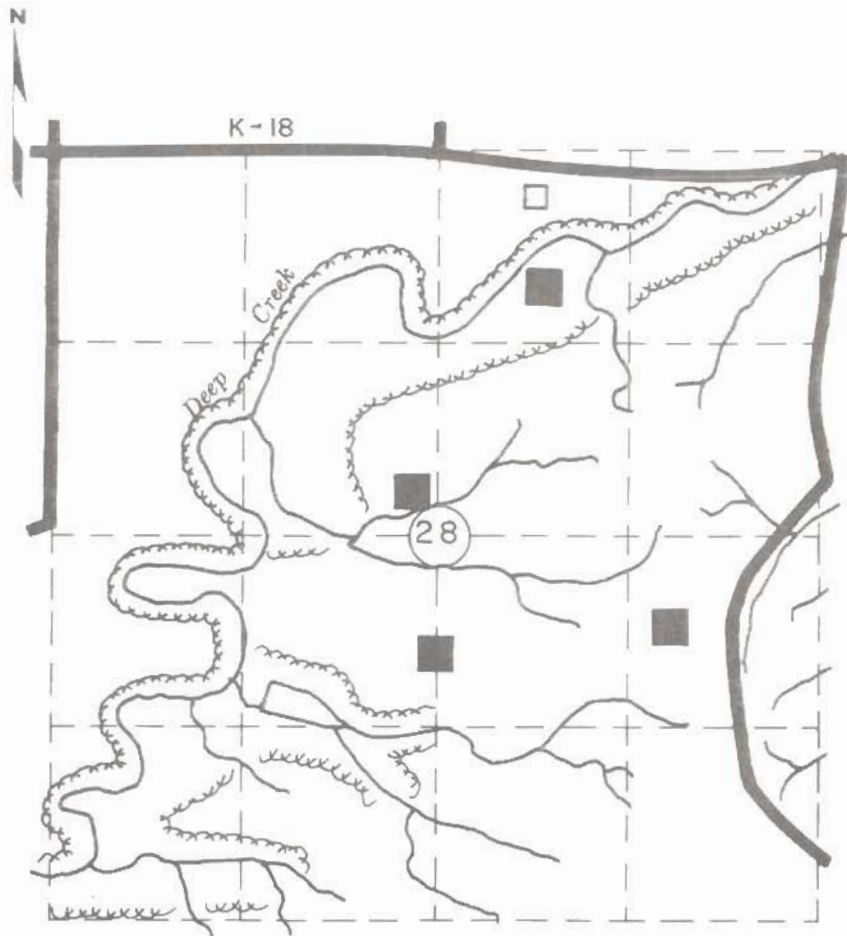
Site No. LS+37
Pzt Date October, 1977
 Material Limestone County Riley
 Location SE 1/4 Sec. 28 Twp. 10S Range 9E
 Owner Forrest A. Moore Route 3 Manhattan, KS
 name address
 Nature of Deposit Dry Accessibility Fair Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

Geological Age Pennsylvanian
 Geological Source Zeandale Ls. Fm. Tarkio Limestone Mbr.
 Material Similar To KDOT Lab. No. 17818 17819 17819 17819
 (A) (B) (C) (A) (B) (C)
 Specific Gravity (Sat.) 2.63 2.61 2.61 2.63 (Dry) 2.57 2.55 2.55 2.57
 Los Angeles Wear 31.0 (B)
 (A) (B) (C)
 Absorption 2.40 2.60 2.54 2.33 Soundness 0.96
 Wt. Cv. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-35



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

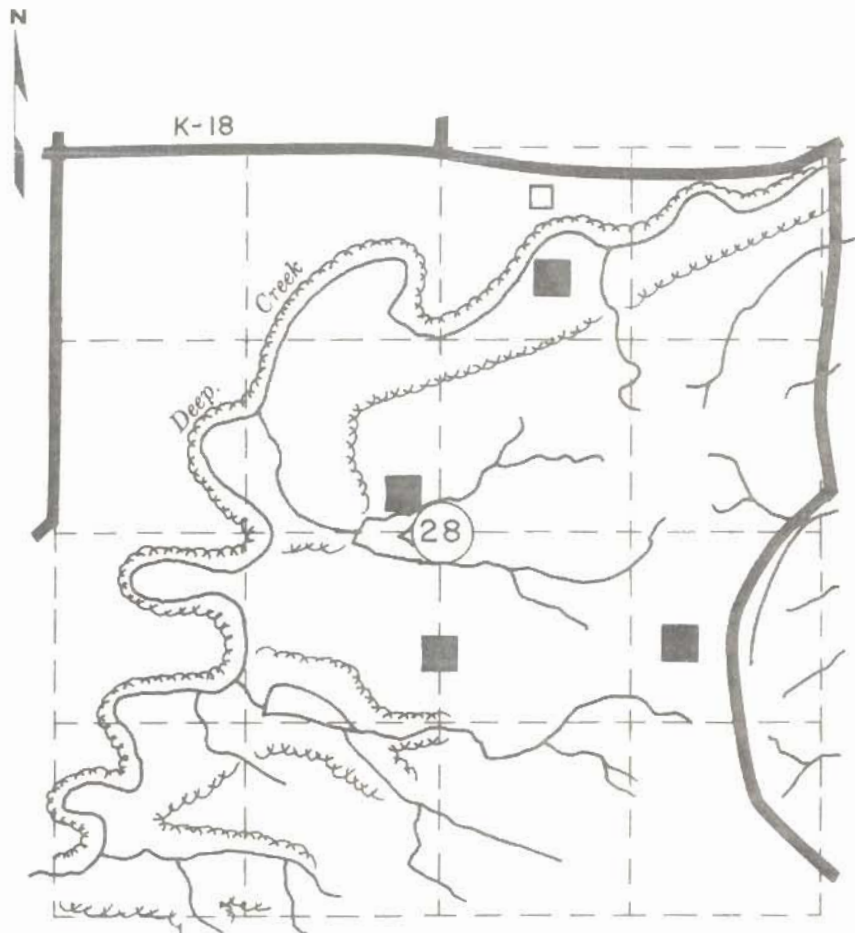
Site No. LS+38
Pzt Date October, 1977
 Material Limestone County Riley
 Location SE 1/4 Sec. 28 Twp. 10S Range 9E
 Owner Forrest A. Moore Route 3 Manhattan, KS
name address
 Nature of Deposit Dry Accessibility Fair Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | Wash 200 | G.F. | LL | P.L. |
|-----------|----------------------------|----------------------|-------------------|-----|-----|-----|---|---|----|----|----|-----|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | |
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CORRELATION DATA

Geological Age Pennsylvanian
 Geological Source Zeandale Ls. Fm. Tarkio Limestone Mbr.
 Material Similar To KDOT Lab. No. 13109 13109 13109 12919
(A) (B) (C) (D)
 Specific Gravity (Sat.) 2.61 2.61 2.60 2.58 (Dry) 2.54 2.54 2.53 2.48
(A) (B) (C) (D)
 Los Angeles Weir 36.9
(A) (B) (C) (D)
 Absorption 2.73 2.79 2.85 2.67 Soundness 0.95
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site 81-30



Scale: 1 Inch = 1/2 Mile

Site No. LS+40 Date October, 1977
Pgn
 Material Limestone County Riley
 Location SE 1/4 Sec. 9 Twp. 11S Range 7E
 Owner Arthur Cederberg 318 Leavenworth Manhattan, KS
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate XI
 Status of Site Open Materials Site; Sampled

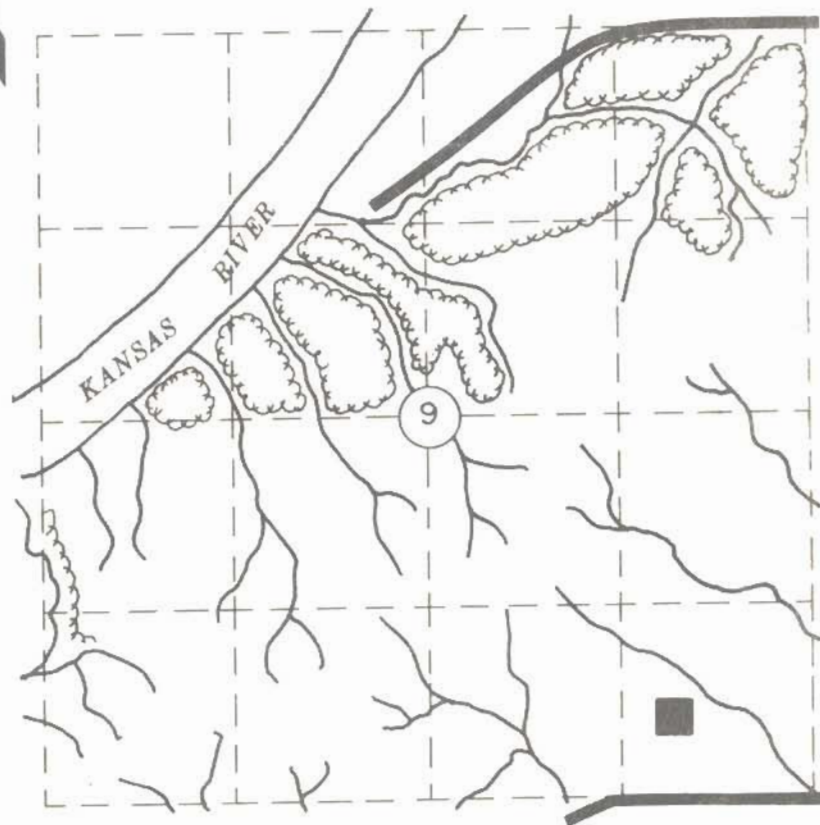
EXPLORATION DATA

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

Geological Age Permian
 Geological Source Grenola L.S. Fm. Neva Limestone Mbr.
 Material Similar To KDOT Lab No. 93202 93203
 Specific Gravity (Sat.) 2.34 2.30 (Dry)
 Los Angeles Wear 43.0(B) 50.6(B)
 Absorption (1)8.77 (2)8.63 Soundness 0.87 0.72
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-19

69



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+41
Pbc Date October, 1977
 Material Limestone County Riley
 Location NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 21 Twp. 11S Range 7E
 Owner Leonard N. Erickson Route 2 Manhattan, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate XI
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | Wash 200 | G.F. | LL | P.I |
|-----------|----------------------------|----------------------|-------------------|-----------------|---------------|-----|---|---|----|----|----|-----|--|----------|------|----|-----|
| | | | | 1 $\frac{1}{2}$ | $\frac{3}{4}$ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Beattie Ls. Fm. Cottonwood Limestone Mbr.
 Material Similar To KDOT Lab No. 65-750

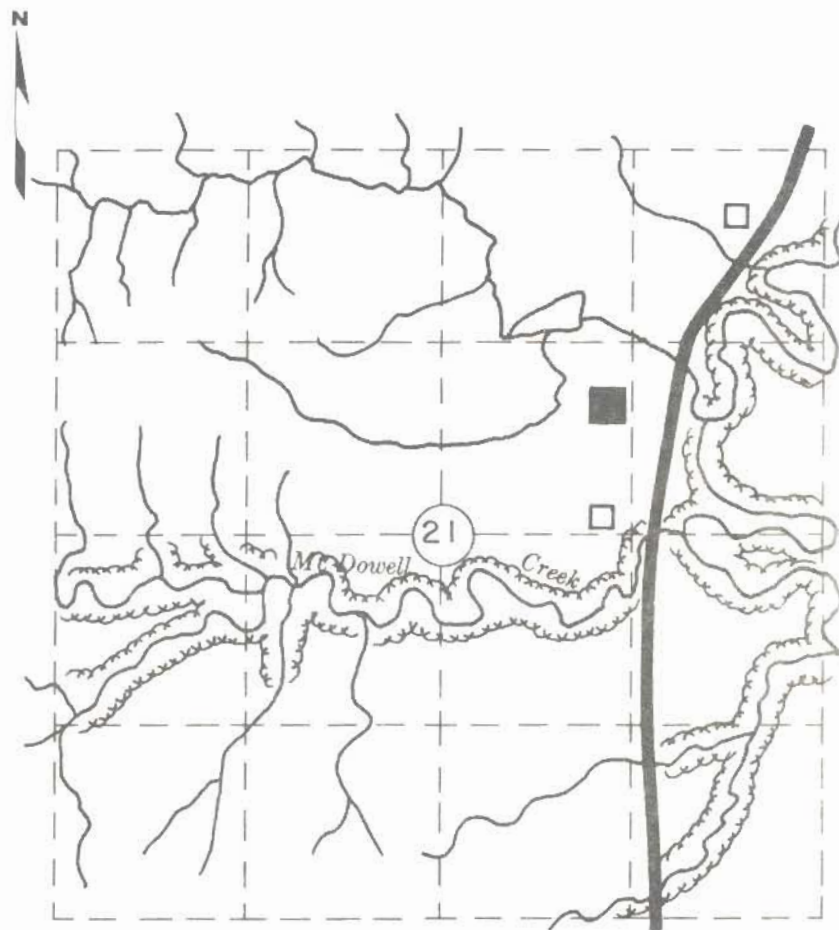
Specific Gravity (Sat.) 2.43 (Dry) 2.31

Los Angeles Wear 30.5(B)

Absorption 5.25 Soundness _____

Wt. Cu. Ft. _____ Str. Ratio _____

Remarks KDOT Materials Dept. Site No. 81-46



Scale: 1 Inch = 1/4 Mile

70

Site No. SG+42
Qa1
 Date October, 1977
 Material Sand & Gravel County Riley
 Location NE 1/4 Sec. 31 Twp. 10S Range 8E
 Owner Robert Lake Route 2 Manhattan, KS
 Nature of Deposit Wet Accessibility Good Site Located on Plate XII
 Status of Site Open Materials Site; Sampled



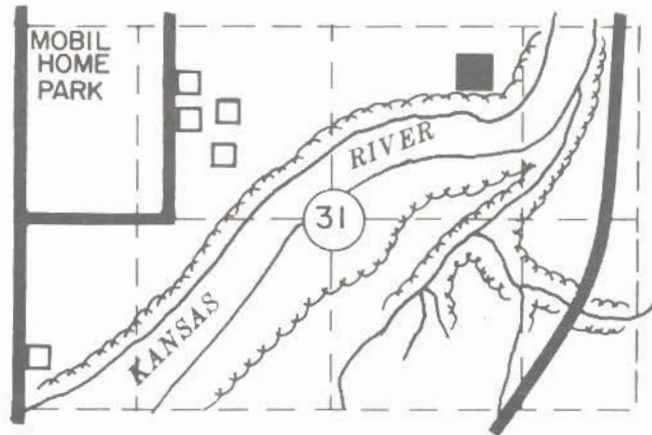
EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|----|----|----|----|-----|------|------|----------|------|------|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
| | | | | | 0 | 1 | 5 | 16 | 40 | 71 | 95 | 100 | 0.49 | 3.27 | | | | |
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71

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To KDOT Lab No. 15279
 Specific Gravity (Sat.) 2.62 (Dry) _____
 Los Angeles Wear 35.6
 Absorption 0.6 Soundness 0.95
 Wt. Cu. Ft. 112.86 Str. Ratio 1da. 1.30 3da. 1.32
 Remarks KDOT Materials Dept. Site No. 81-33
Grading D Color Test - Clear



SCALE: 1 inch = 1/2 mile

MATERIAL SITE DATA FORM

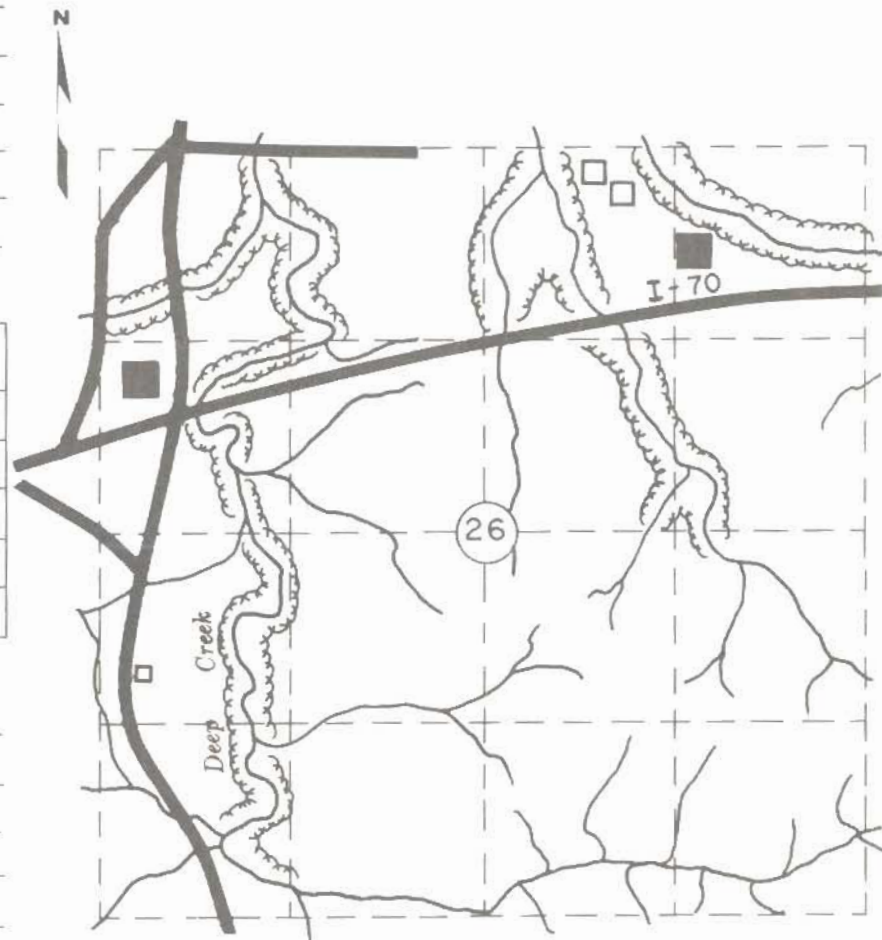
Site No. LS+43
Pbc Date October, 1977
 Material Limestone County Riley
 Location NW¼ Sec. 26 Twp. 11S Range 8E
 Owner A. B. Hudson 1st National Bank Tower Topeka, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate XII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|----|---|-----|---|---|----|----|----|-----|--|--|----------|------|------|------|
| | | | | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Beattie Ls. Fm. Cottonwood Limestone Mbr.
 Material Similar To KDOT Lab. No. 24877 (A) 24877 (B) 24877 (C)
 Specific Gravity (Sat.) 2.41 (A) 2.42 (B) 2.41 (C) (Dry) 2.28 (A) 2.29 (B) 2.29 (C)
 Los Angeles Wear 5.73 (A) 5.41 (B) 5.49 (C)
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 KDOT Material Dept. Site No. 81-39



Scale: 1 Inch = ¼ Mile

TEST DATA FORM

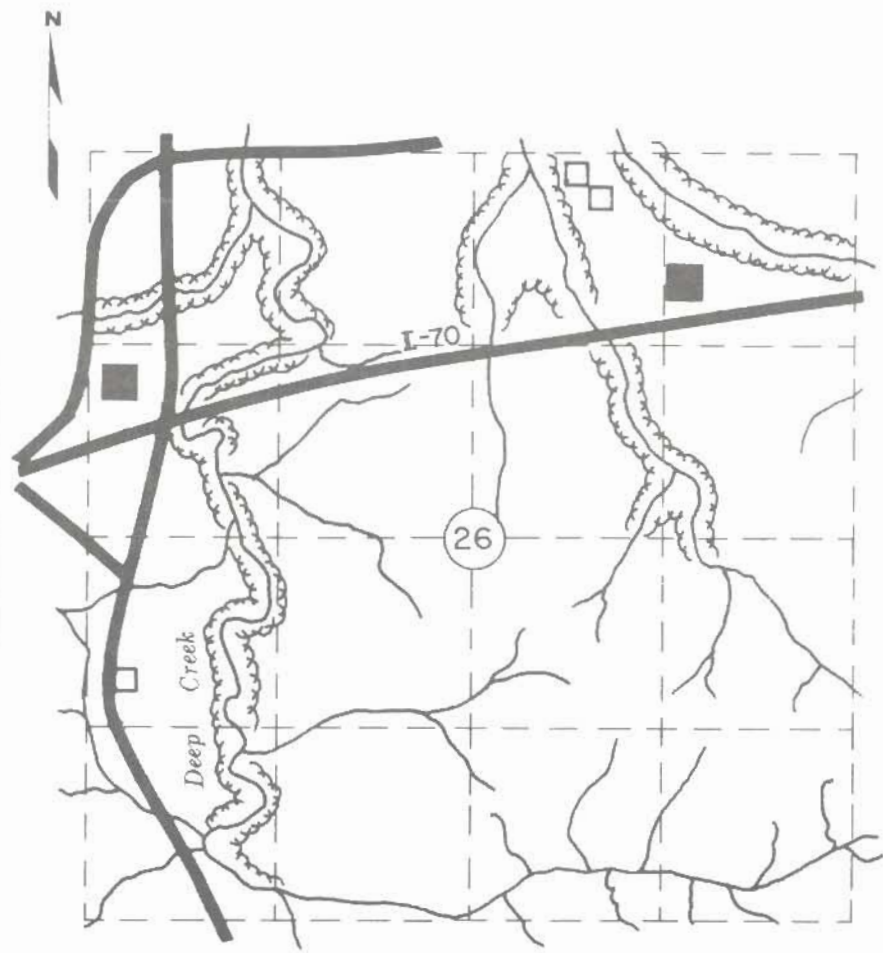
Site No. LS+44
Pbc Date October, 1977
 Material Limestone County Riley
 Location NE 1/4 Sec. 26 Twp. 11S Range 8E
 Owner Ernest L. Yaege Route 3 Manhattan, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate XII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

Geological Age Permian
 Geological Source Beattie Ls. Fm. Cottonwood Limestone Mbr.
 Material Similar To KDOT Lab. No. 21039 (A) 21040 (B) 21040 (C)
 Specific Gravity (Sat.) 2.43 (A) 2.43 (B) 2.43 (C) (Dry) 2.31 (A) 2.31 (B) 2.30 (C)
 Los Angeles Wear 39.7 B (A) (B) (C)
 Absorption 5.55 (A) 5.53 (B) 5.63 (C) Soundness 0.90
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-36



73

MATERIAL SITE DATA FORM

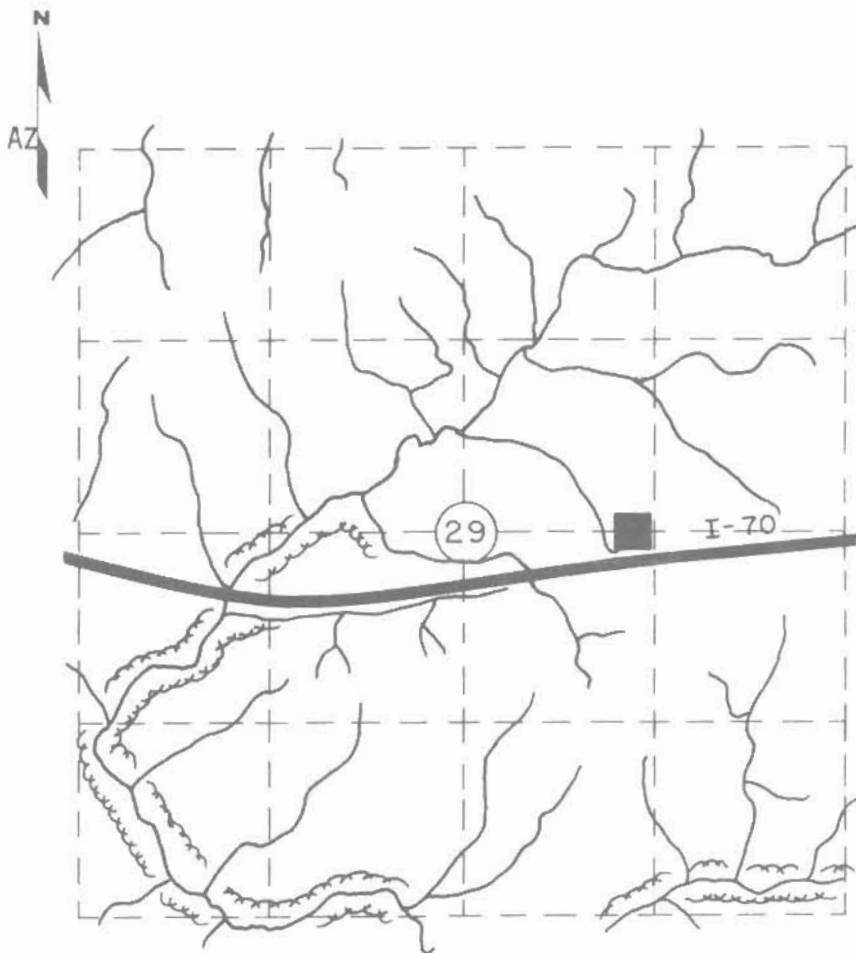
Site No. LS+45
Pwh Date October, 1977
 Material Limestone County Riley
 Location E $\frac{1}{2}$ Sec. 29 Twp. 11S Range 9E
 Owner Oliver W. Hess Trustee 4736 W. El Caminito Dr. Glendale, AZ
 Nature of Deposit Dry Accessibility Good Site Located on Plate XII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Wreford Ls. Fm. Havensville Shale Mbr. "Reef"
 Material Similar To KDOT Lab. No. 81636
 Specific Gravity (Sat.) 2.28 (Dry) _____
 Los Angeles Wear 52.5 A 53.8 B
 Absorption (1) 6.17 Soundness (1) 0.95
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 81-17



Scale: 1 Inch = 1/4 Mile

OPEN MATERIALS SITES ; NOT SAMPLED

LEGEND

===== Trail or lane

————— Road

+ + + + + Railroad

~~~~~ Hedge or trees

~~~~~  
Name Major streams

~~~~~ Intermittent streams

~~~~~ Pond or lake

■ Open materials sites; sampled

● Open materials sites; not sampled

▼ Prospective materials sites; sampled

◆ Prospective materials sites; not sampled

⑤ Center of section

□ Dwelling

⊕ Cemetery

□ School

⊕ Church

▤ Town or city

Site No. LS+31
Pbc Date October, 1977
 Material Limestone County Riley
 Location N $\frac{1}{2}$, SW $\frac{1}{4}$ Sec. 21 Twp. 10S Range 8E
 Owner Lee E. Murphy Route 2 Manhattan, KS
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Not Sampled

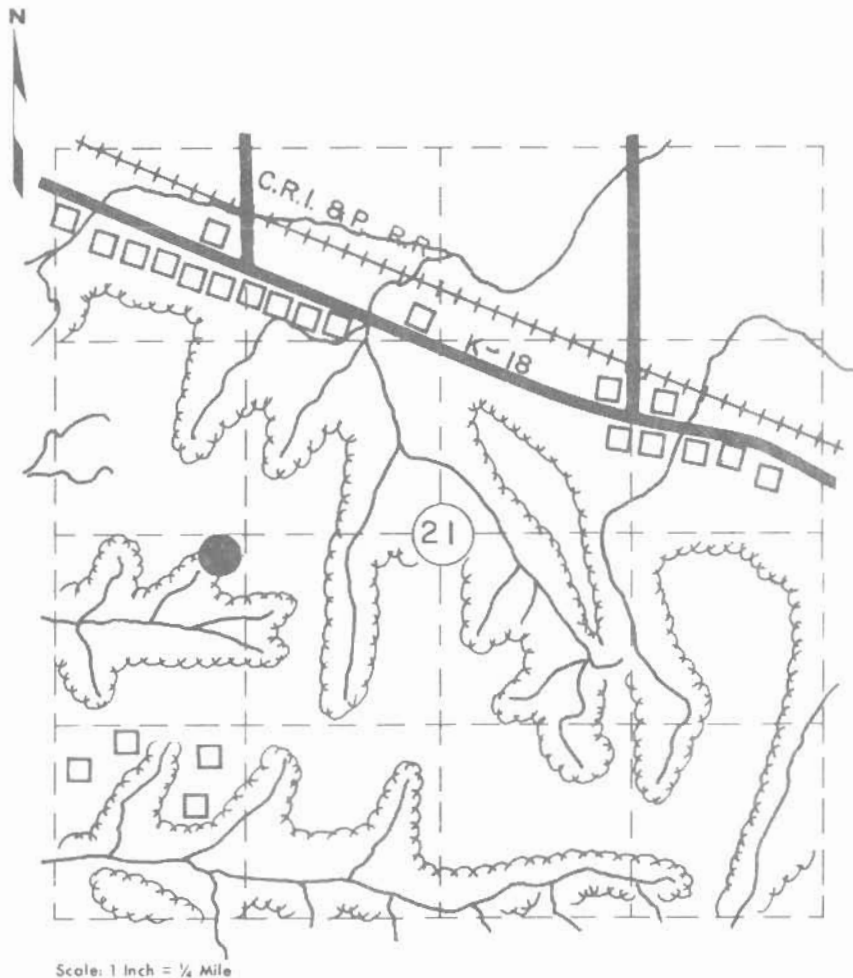
EXPLORATION DATA

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

Geological Age Permian
 Geological Source Beattie Ls. Fm. Cottonwood Limestone Mbr.
 Material Similar To _____

 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1 inch = 1/4 Mile

MATERIAL SITE DATA FORM

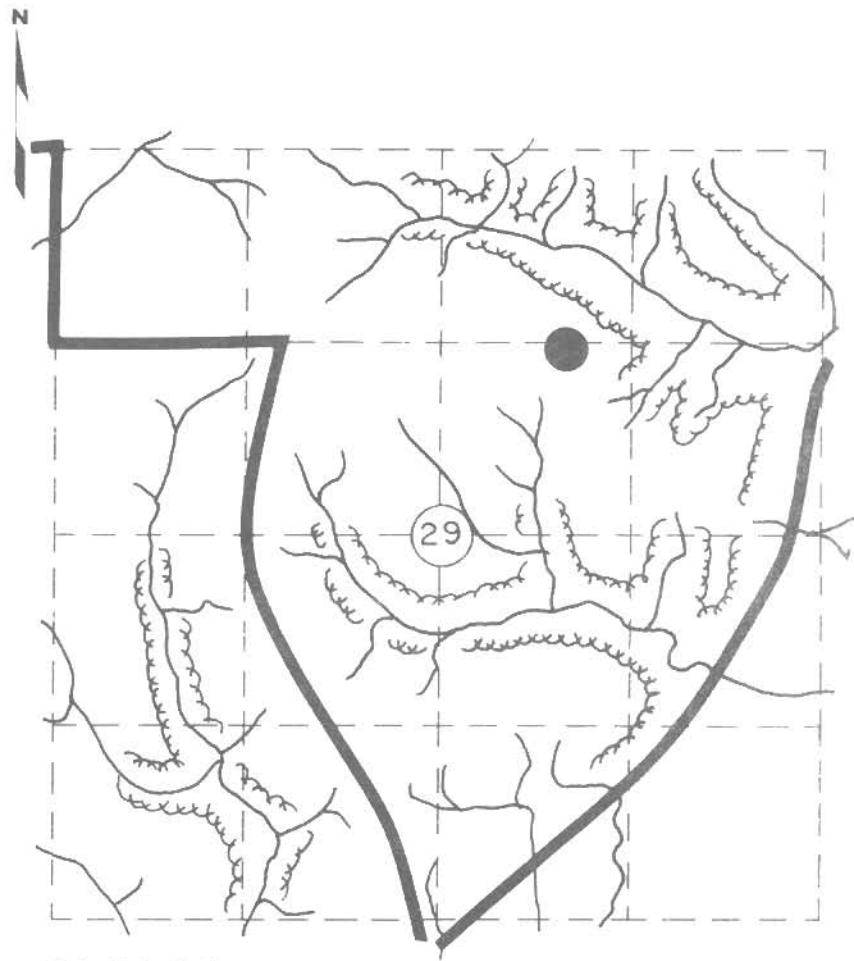
Site No. LS+47
Pbfr Date October, 1977
 Material Limestone County Riley
 Location NE 1/4 Sec. 29 Twp. 6S Range 7E
 Owner USA
 Nature of Deposit Dry Accessibility Poor Site Located on Plate II
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

Geological Age Permian
 Geological Source Barneston Ls. Fm. Fort Riley Limestone Mbr.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 619 (50)



Scale: 1 Inch = 1/2 Mile

Site No. LS+48
Pbfr Date October, 1977
 Material Limestone County Riley
 Location NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 9 Twp 6S Range 7E
 Owner Ed Siverling Blue Rapids, KS
name address
 Nature of Deposit Dry Accessibility Fair Site Located on Plate II
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

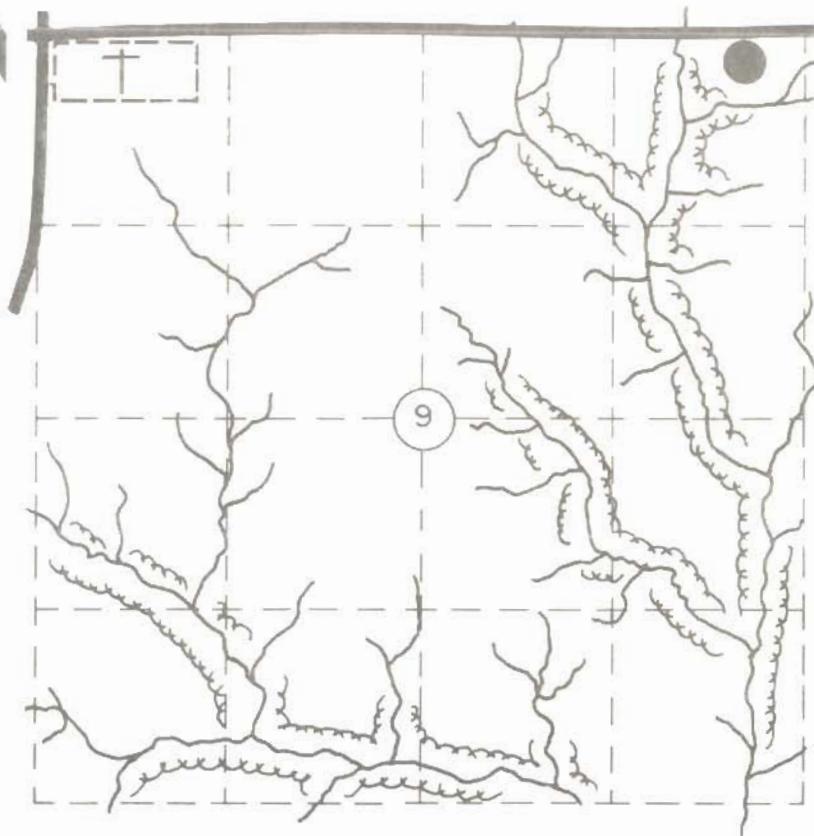
| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Depth of Material | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|-------------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|------|------|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

Geological Age Permian
 Geological Source Barneston Ls. Fm. Fort Riley Limestone Mbr.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 619 (49)

79

N



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

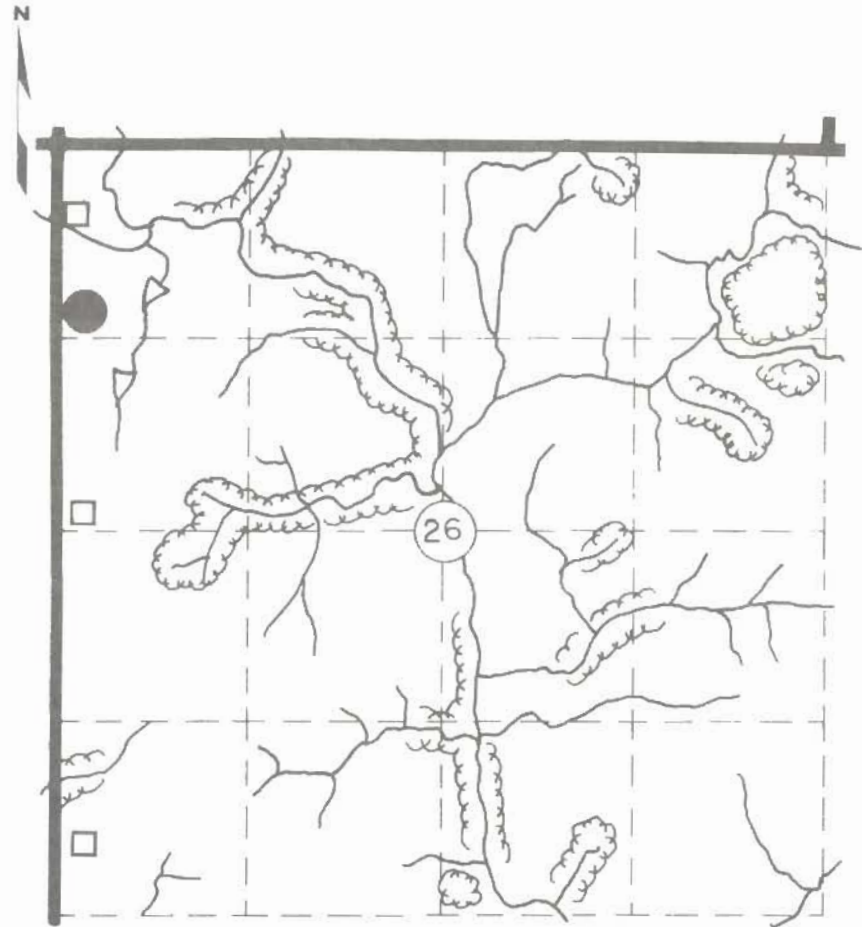
Site No. LS+49
Pdt Date October, 1977
 Material Limestone County Riley
 Location NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 26 Twp. 8S Range 6E
 Owner Lloyd Woodworth Route 4 Manhattan, KS
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VI
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

Geological Age Permian
 Geological Source Doyle Shale Fm. Towanda Limestone Mbr.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Department Site No. Riley #7



Scale: 1 inch = 1/4 Mile

08

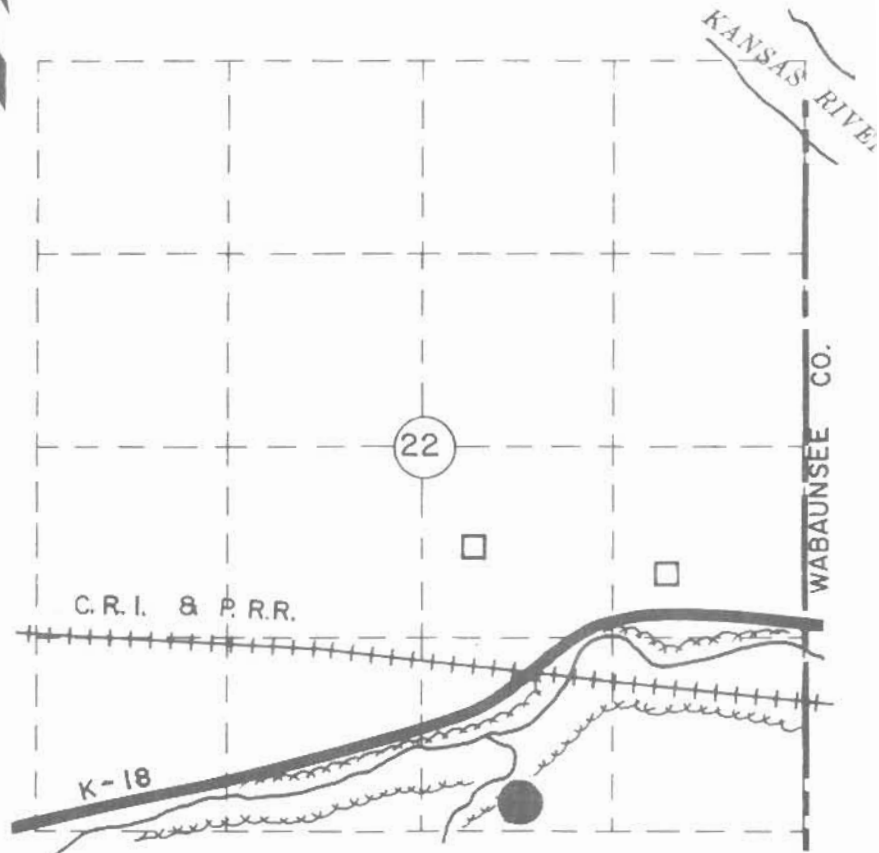
Site No. LS+39
Pzt Date October, 1977
 Material Limestone County Riley
 Location SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 22 Twp. 10S Range 9E
 Owner Harold D. Nertz Route 3 Manhattan, KS
name address
 Nature of Deposit Dry Accessibility Fair Site Located on Plate IX
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|-----|-----|-----|---|---|----|----|----|-----|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | |
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CORRELATION DATA

Geological Age Pennsylvanian
 Geological Source Zeandale Ls. Fm. Tarkio Limestone Mbr.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft _____ Str. Ratio _____
 Remarks _____



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+51
Pbfr Date October, 1977
 Material Limestone County Riley
 Location SW $\frac{1}{4}$ Sec. 2 Twp. 11S Range 6E
 Owner U.S. Government address _____
 Nature of Deposit name Dry Accessibility Good Site Located on Plate X1
 Status of Site Open Materials Site; Not Sampled

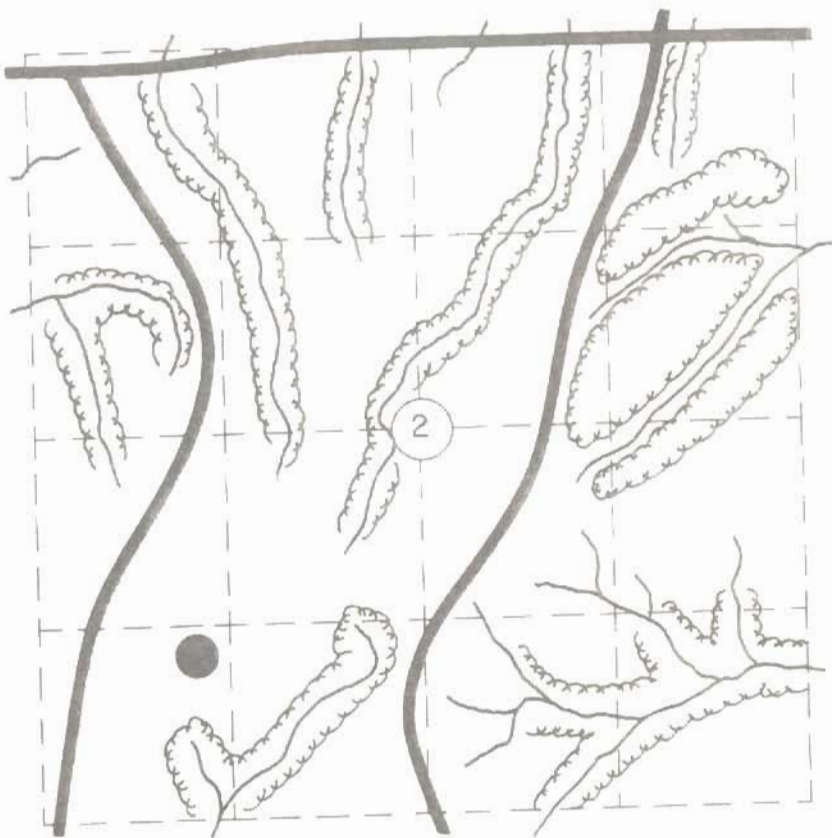
EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | Sieve Analysis | | | | | | | | | Wash 200 | G.F. | LL | PI |
|-----------|----------------------------|----------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|----------|------|----|----|
| | | | | 1 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Barneston Ls. Fm. Florence Limestone Mbr.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 619 (44)

N



Scale: 1 Inch = 1/4 Mile

E DATA FORM

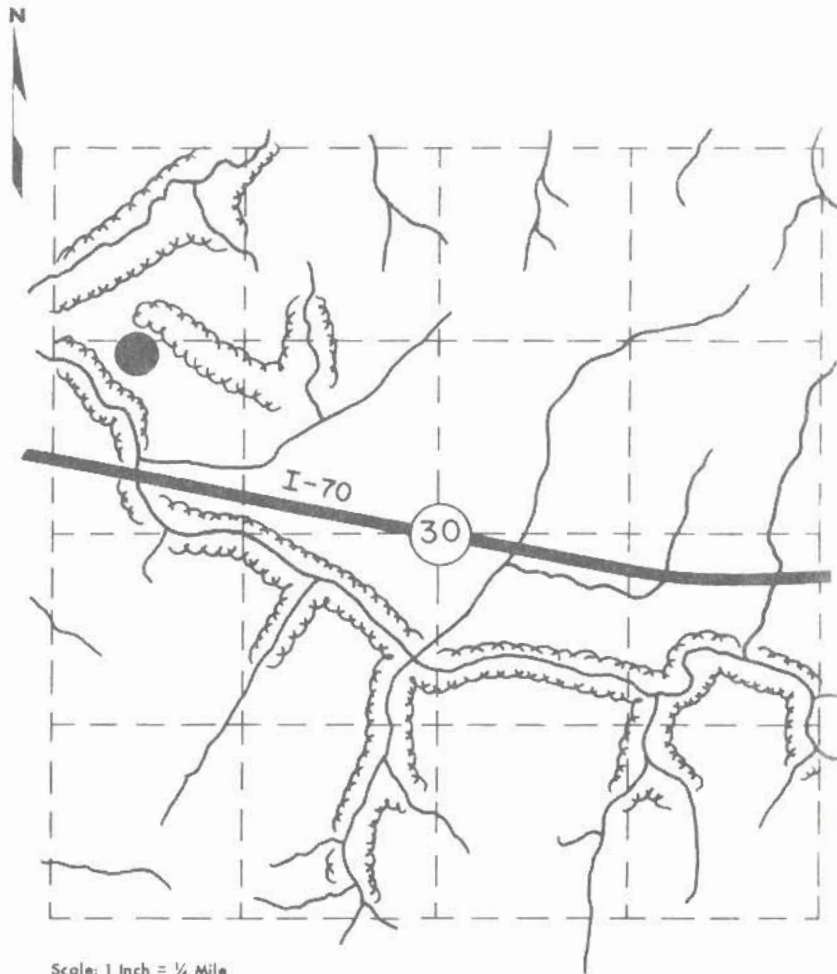
Site No. LS+52
Qa1 Date October, 1977
 Material Limestone Gravel County Riley
 Location N₂ Sec. 30 Twp. 11S Range 9E
 Owner Smith Stiles 912 Kearney Manhattan, KS
 name address
 Nature of Deposit Wet Accessibility Fair Site Located on Plate XII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | | Wash 200 | G.F. | L.L. | P.I. |
|-----------|----------------------------|----------------------|-------------------|----|----|-----|----|----|----|----|----|-----|--|--|----------|------|------|------|
| | | | | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
| 53717 | | | 2" | 3 | 11 | 48 | 80 | 93 | 96 | | | | | | 0.56 | | | |
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CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To KDOT Lab. No. 53717
 Specific Gravity (Sat.) 2.45 (Dry) _____
 Los Angeles Wear 27.4 A
 Absorption _____ Soundness 0.95
 Wt. Cu. Ft. 95.2 Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. Riley #2
This material not sampled by a representative of KDOT



Scale: 1 Inch = ¼ Mile

23

MATERIAL SITE DATA FORM

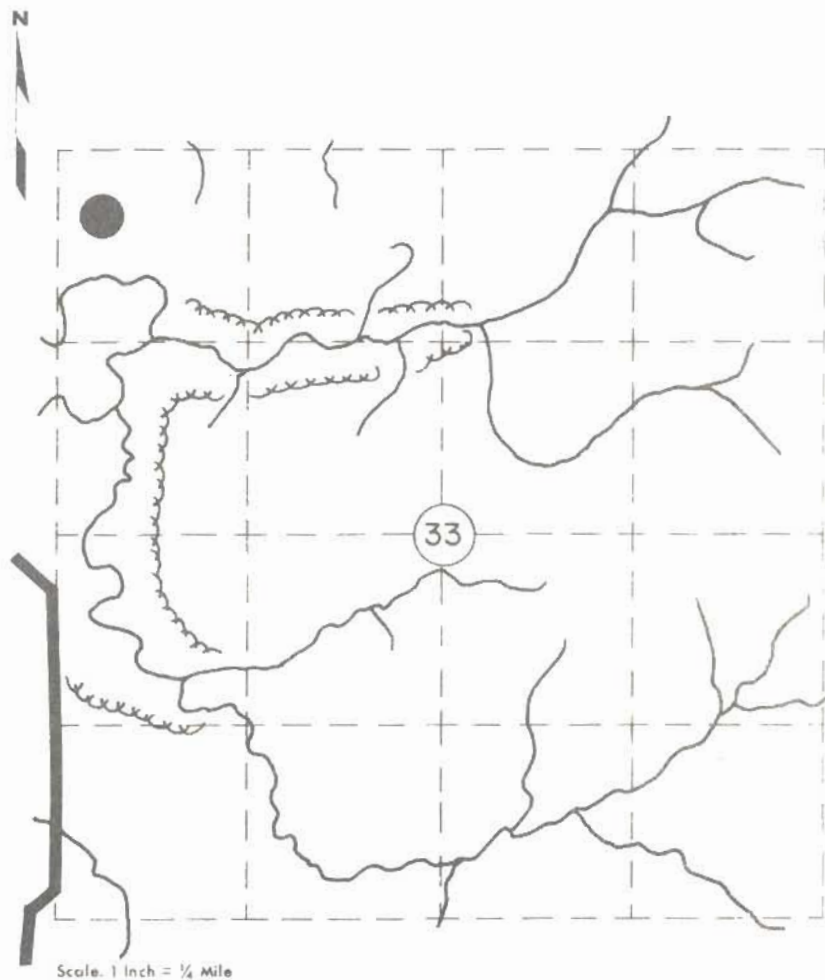
Site No. LS+53
Pzt Date October, 1977
 Material Limestone County Riley
 Location NW¼ NW¼ Sec. 33 Twp. 10S Range 9E
 Owner Harold R. Stewart Route 3 Manhattan, KS
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate XII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Over-Burden | Depth of Material | | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|----------------------|-------------------|----|---|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1½ | ¾ | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Pennsylvanian
 Geological Source Zeandale Ls. Fm. Tarkio Limestone Mbr.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



Site No. LS+46
Pdt Date October, 1977
 Material Limestone County Riley
 Location NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 29 Twp. 6S Range 5E
 Owner Erle C. Bergstrom Green, Kansas
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

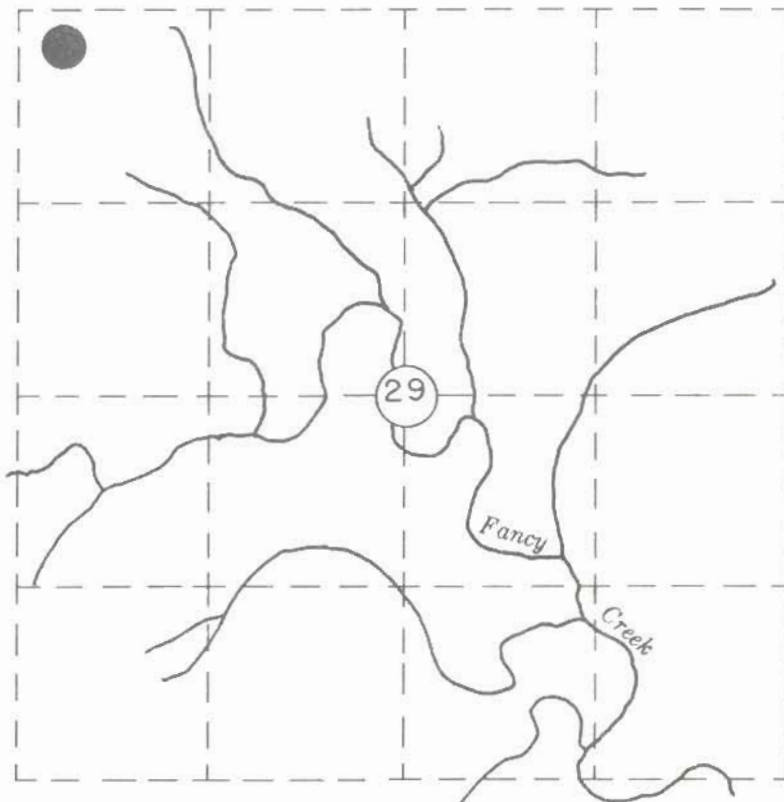
EXPLORATION DATA

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

Geological Age Permian
 Geological Source Doyle Sh. Fm. Towanda Limestone Mbr.
 Material Similar To _____

 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 619 46



Scale: 1 inch = 1/4 Mile

85

PROSPECTIVE MATERIALS SITES ; NOT SAMPLED

LEGEND

===== Trail or lane

———— Road

+ + + + + Railroad

~~~~~ Hedge or trees

~~~~~  
Name Major streams

~~~~~ Intermittent streams

~~~~~ Pond or lake

■ Open materials sites; sampled

● Open materials sites; not sampled

▼ Prospective materials sites; sampled

◆ Prospective materials sites; not sampled

⑤ Center of section

□ Dwelling

⊕ Cemetery

□ School

⊕ Church

▣ Town or city

MATERIAL SITE DATA FORM

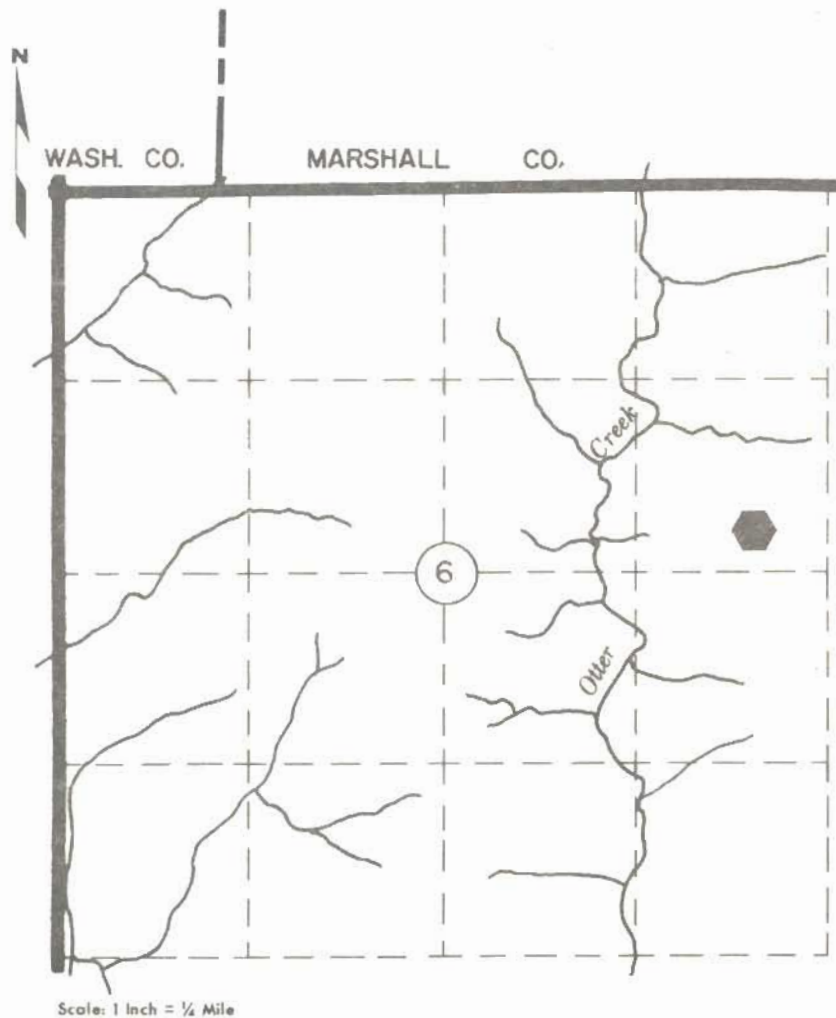
Site No. LS+54
Pdt Date October, 1977
 Material Limestone County Riley
 Location SE 1/4 NE 1/4 Sec. 6 Twp. 6S Range 6E
 Owner Wayne E. Anderson Waterville, KS
 Nature of Deposit Dry name Accessibility Poor address Site Located on Plate I
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Overburden | Depth of Material | Sieve Analysis | | | | | | | | | | | Wash 200 | G.F. | LL | P.I. |
|-----------|----------------------------|---------------------|-------------------|----------------|-----|-----|---|---|----|----|----|-----|--|--|----------|------|----|------|
| | | | | 1/2 | 3/4 | 3/8 | 4 | 8 | 16 | 30 | 50 | 100 | | | | | | |
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CORRELATION DATA

Geological Age Permian
 Geological Source Doyle Sh. Fm. Towanda Limestone Mbr.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks KDOT Materials Dept. Site No. 619 (55)



69

GLOSSARY

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

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

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

Aggregate: Any of several hard, inert, construction materials (such as sand, gravel, shells, slag, crushed stone, or other mineral material), or combinations thereof, used for mixing in various-sized fragments with a cementing or bituminous material to form concrete or bituminous mix.

Alluvium: A deposit of clay, silt, sand, or gravel deposited by a stream or other body of running water.

Aquifer: A body of rock that contains sufficient saturated permeable material to conduct ground water and to yield economically significant quantities of ground water to wells and springs.

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

Bioherm: They represent accumulations of organic remains and debris formed under conditions of prolific life.

cm: Centimeter

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

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

Construction aggregate: Processed rock that will meet standard specifications for concrete and bituminous construction.

Crossbedding: Term applied to sedimentary deposits whose bedding is inclined at various angles to the stratification.

Cyclothem: A series of beds deposited during a single sedimentary cycle.

Degrade: To lower the level of a stream or river valley by stream erosive action.

Exposure patterns: Topographic features formed on the land surface by the exposure of geologic units.

Fine sand: An aggregate of consolidated minerals or rock particles, the dimensions of which are not less than 0.05 of a millimeter and not more than 0.42 of a millimeter. The term refers to size of grain and not to composition; however, since most sands are composed of quartz and feldspar, and the term is used without qualifications, a siliceous composition is implied.

Flaggy: Descriptive of a sedimentary rock that splits into layers from 1 cm to 5 cm in thickness.

Formation: A persistent body of rocks, having easily recognizable upper and lower boundaries that can be traced in the field without recourse to detailed paleontologic or petrologic analysis, and large enough to be represented on a geologic map as a practical or convenient unit for mapping and description.

Fossil: Any remains, trace, or imprint of a plant or animal that has been preserved, by natural processes, in the Earth's crust since some past geologic time.

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

gal/min: Gallons per minute.

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: Term pertaining to erosion, deposition, and diastrophic 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: A term that refers to rocks or deposits that were laid down during a particular geologic period (e.g. the Pennsylvanian, Permian, and Quaternary).

Geologic unit: A general term used to denote a geologic formation, member, or an unconsolidated deposit.

Gradation factor: The value obtained by adding the percentages of material retained on the 1½", ¾", ⅜", 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 1001 of the State Highway Commission of Kansas, Standard Specifications, 1973 edition.

Ground-water: That part of the subsurface water that is the zone of saturation, including underground streams.

Igneous rocks: Rocks produced from molten or partly molten material.

Kimberlites: A porphyritic alkalic peridotite containing abundant phenocrysts of olivine (commonly serpentinized or carbonatized) and phlogopite (commonly chloritized).

Landform: Any physical, recognizable form or feature of the Earth's surface, having a characteristic shape, and produced by natural causes; it includes major forms such as plain, plateau, mountain, hill, valley, slope, esker, and dune.

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

Liquid limit: The water-content boundary between the semiliquid and the plastic states of sediment. Determined by tests performed in accordance with the Kansas Test Method KT-10 of the State Highway Commission of Kansas Construction Manual, Part V, 1969 edition.

l/s: Liters per second.

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

Los Angeles wear: Determined by tests performed in accordance with A.A.S.H.O. designation T96 as modified by section 1001 of the State Highway Commission of Kansas Standard Specifications, 1973 edition.

m: Meter

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 smaller or finer-grained, continuous material enclosing, or filling the interstices between the larger grains or particles of a sediment or sedimentary rock.

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

mg/l: Milligrams per liter.

Open materials site: A pit or quarry from which material is produced for possible construction purposes.

Outwash: Stratified detritus (chiefly sand and gravel) removed or 'washed out' from a glacier by meltwater streams and deposited in front of or beyond the terminal moraine or the margin of an active glacier.

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

Plasticity index: The water-content range of a soil at which it is plastic; determined by tests performed in accordance with the Kansas Test Method KT-10 of the State Highway Commission of Kansas Construction Manual, Part V, 1969 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 and producing construction aggregate.

Reef: A ridge or mound-like, layered, sedimentary rock structure, built by and composed almost exclusively of the remains of sedimentary organisms (esp. corals) and usually enclosed in rock of differing lithology.

Soundness: Determined by tests performed in accordance with section 1001 of the State Highway Commission of Kansas Standard Specifications, 1973 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.

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

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

Talus: A sloping mass of rock fragments at the base of a cliff.

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

Unconsolidated deposits: A sediment that is loosely arranged or unstratified, or whose particles are not cemented together, occurring either at the surface or at depth.

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

Weathering: The disintegration (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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