OPEN MATERIALS SITES; SAMPLED

LEGEND

Trail or lane
Road
Railroad
Hedge or trees
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
Center of section
Dwelling
Cemetery
School
Church
Town or city
MATERIAL SITE DATA FORM

SG+1

Site No. Qt

Date April, 1976

Sand & Gravel

County Republic

Location E 1/2 SW 1/4

Sec. 11

Twp. 1S

Range 5W

G. Kettlerhut

Bryon, Nebraska

Owner

Address

Nature of Deposit

Dry

Accessibility

Good

Site Located on Plate 1

Status of Site

Open Materials Site; Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
<th>Wash 200</th>
<th>G.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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<tbody>
<tr>
<td>14</td>
<td>Clay</td>
<td>6 27</td>
<td>0 1 2 5 13 53</td>
<td>95</td>
<td>8.0</td>
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<td>15</td>
<td>Clay</td>
<td>11 25</td>
<td>0 4 6 14 27 43</td>
<td>60 90 94</td>
<td>2.8</td>
<td>3.28</td>
<td>16 N.P.</td>
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</table>

CORRELATION DATA

Geological Age Quaternary

Geological Source Wisconsinan Terrace

Material Similar To KDOT Lab No. 72-720

Specific Gravity (sat.) 2.58 I

Dry 2.60 I

Los Angeles Wear 32(D)

Absorption 8.68

Soundness .99

Mt. Co.Ft. | Str. Ratio |
|-----------|------------|

Remarks KDOT Materials Department Site No. 79-22

14 & 15 represent the finest and coarsest material that has been sampled at this site.

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

Site No. SG+2
Owner Qds
Date April, 1976

Material Sand & Gravel
County Republic
Location N4°20' W15'4W
Sec. 21
Twp. 1S
Range 4W
Howard Miller
Owner Reed, Kansas
Status of Site Open Materials Site; Sampled
Nature of Deposit Wet
Accessibility Fair
Site Located on Plate 1

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at bottom of hole</th>
<th>Depth of overburden</th>
<th>Percent Retained</th>
<th>Depth of Material</th>
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<td>Sand</td>
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<td>Sand</td>
<td>20</td>
<td>6 10 20 48 84 98 2.66</td>
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</table>

CORRELATION DATA

Geological Age Quaternary
Geological Source Dune Sand
Material Similar To

Specific Gravity (Sat.) (Dry)
Los Angeles wear
Absorption Soundness
Wt. Cn.Ft.
Str. Ratio
Remarks

Scale: 1" = 1/4 mile
MATERIAL SITE DATA FORM

SG+3
Qds
Site No. Date April, 1976

Fine Sand County Republic
Material

Location NW 1/4 Sec. 6 Twp. 3S Range 4W

Herbert Sandell Manhattan, Kansas
Owner

Nature of Deposit Dry Accessibility Good Site Located on Plate IV

Status of Site Open Materials Site; Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
<th>Wash</th>
<th>B.F.</th>
<th>L.T.</th>
<th>P.I.</th>
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<tbody>
<tr>
<td></td>
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</table>

CORRELATION DATA

Geological Age Quaternary

Geological Source Dune Sand

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Co.Ft. Str. Ratio

Remarks KDOT Materials Department Site No. 79-8

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

Site No. 01
Date April, 1976

Material Silt
County Republic

Location NW 1/4 Sec. 5
Township 3S Range 4W

Owner William B. Moe
Address Scandia, Kansas

Nature of Deposit Dry
Accessibility Good

Status of Site Open Materials Site; Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test</th>
<th>Material</th>
<th>Depth of</th>
<th>Percent Retained</th>
<th>Wash 200</th>
<th>S.F.</th>
<th>L.L.</th>
<th>F.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>at Bottom of Hole</td>
<td>Material</td>
<td>of Material</td>
<td>1/2</td>
<td>3/4</td>
<td>3/8</td>
<td>4</td>
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<tr>
<td>1</td>
<td>3</td>
<td>Clay</td>
<td>15</td>
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<td>1</td>
<td>1</td>
<td>1</td>
</tr>
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<td>2</td>
<td>2</td>
<td>Clay</td>
<td>15</td>
<td>0</td>
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<td>1</td>
<td>1</td>
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<td>3</td>
<td>2</td>
<td>Clay</td>
<td>15</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>Clay</td>
<td>15</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>Clay</td>
<td>10</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

CORRELATION DATA

Geological Age Quaternary
Geological Source Loess

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption

Soundness

M.C. & F.C. Str. Ratio

Remarks KDOT Materials Department Site No. 79-13

Scale: 1" = 1/4 mile
MATERIAL SITE DATA FORM

SG+5
Qal

Date: April, 1976

Material: Sand & Gravel
County: Republic

Location: SE¼
Sec.: 7
Twp.: 3S
Range: 4W

Owner: Lila L. Barclay
Address: Belleville, Kansas

Nature of Deposit: Wet
Accessibility: Good
Site Located on Plate: IV

Status of Site: Open Materials Site; Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Material</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
<th>Wash 200</th>
<th>R.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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<tbody>
<tr>
<td>Stockpile</td>
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<tr>
<td>Lab. No. 68-230</td>
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<td>0 1 8 35</td>
<td>7588 93 94</td>
<td>5 3.94</td>
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<td></td>
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</table>

CORRELATION DATA

Geological Age: Quaternary
Geological Source: Alluvium
Material Similar To: KDOT Lab. No. 68-230

Specific Gravity (Sat.) 2.57 (Dry)
Los Angeles Wear 34(D)
Absorption 0.91
Soundness 0.97
St. Co.Ft. Str. Ratio

Remarks: KDOT Materials Department Site No. 79-20
Abandoned pit

Scale: 1" = 1/4 mile
MATERIAL SITE DATA FORM

SG-6  Qat

Site No.          Date          April, 1976
Sand & Gravel    County    Republic
Material         Location: Sec. 17    Twp. 3S    Range 4W
Owner            Lila L. Barclay    Belleville, Kansas
Nature of Deposit Wet    Accessibility    Good    Site Located on Plate IV
Status of Site   Open Materials Site; Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test No.</th>
<th>Material at Bottom of Site</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>65-3997</td>
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</tr>
<tr>
<td>65-4040</td>
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<td>0</td>
<td>1</td>
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</tbody>
</table>

CORRELATION DATA

Geological Age    Quaternary
Geological Source Alluvium
Material Similar To KDOT Lab No. 65-4040

Specific Gravity (Sat.)  2.59
(Dry)
Los Angeles Wear     33(D)
Absorption             0.40
Soundness              0.97
Mixture pt.            Unstr. Ratio
Remarks                KDOT Materials Department Site No. 79-7

Pit inactive
MATERIAL SITE DATA FORM

SG+7
Qa1

Site No. Data April, 1976

Sand & Gravel County Republic

Material Location NW3 Sec. 20 Top. 3S Range 4W

Direction Donald Rumft, Inc. Scandia, Kansas

Owner Name

Nature of Deposit Accessibility Site Located on Plate IV

Status of Site Open Materials Site; Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td>Wash 200 G.F. L.L. F.I.</td>
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<td>70-275</td>
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<td>74-269</td>
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<td>1 0 1 10 30 58 81 96 99 3.75</td>
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</table>

CORRELATION DATA

Geological Age Quaternary

Geological Source Alluvium

Material Similar To KDOT Lab No. 74-269

Specific Gravity (Sat.) 2.55

Specific Gravity (Dry) 2.60

Los Angeles Wear 39(D)

Absorption 0.8

Soundness 0.99

V.O.C.F. 1.87

Dr. Ratio 1.57

Remarks KDOT Materials Department Site No. 79-21

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

Site No. SG+8 Qal
Date April, 1976

Material Sand & Gravel
County Republic

Location E 1/4, NE 1/4 Sec. 20 Twp. 3S Range 4W
Owner Herbert Sandell
Address Manhattan, Ks.

Nature of Deposit Wet
Accessibility Good
Site Located on Plate IV
Status of Site Open Materials Site; Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1/16 2/16 3/16 4</td>
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</tr>
<tr>
<td>65-3997</td>
<td></td>
<td>0 1 4</td>
<td>13 31 55 75 93 99</td>
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<td>65-4040</td>
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<td>0 1</td>
<td>7 24 49 73 94 98</td>
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</table>

CORRELATION DATA

Geological Age Quaternary
Geological Source Alluvium
Material Similar To KDOT Lab No. 65-4040

Specific Gravity (Sat.) 2.59 (Dry)
Los Angeles Wear 33.4(D)
Adhesion .40 Soundness .97
Wt. Co. Ft. Str. Ratio

Remarks KDOT Materials Department Site No. 79-7
Pit inactive

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

SG+9 Qm

Site No. 10-18  Date  April, 1976

Sand & Gravel  County  Republic

Location  SW  Sec. 21  Top. 2S  Range 3W

Eunice Carver Thompson  Belleville, Kansas

Owner  Address  Site Located on Plate V

Nature of Deposit  Wet & Dry  Accessibility  Fair

Status of Site  Open Materials Site; Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
<th>Wash</th>
<th>G.F.</th>
<th>L.t.</th>
<th>P.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>2/4</td>
<td>3/8</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>1</td>
<td>Clay</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Clay</td>
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<td>8</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>21</td>
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</tbody>
</table>

CORRELATION DATA

Geological Age  Quaternary

Geological Source  Meade Formation

Material Similar To  KDOT Lab. No. 56181, 62664 & 82664

Specific Gravity (Sat.)  2.61 (Dry)

Los Angeles Wear  29 (D)

Absorption  Soundness  .98

Wt. Cu.Ft.  108.1

Str. Ratio

Remarks  KDOT Materials Department Site No. 79-2, 1 & 2 represent the finest and coarsest material that has been sampled at this site.

Scale: 1" = 1/4 mile
MATERIAL SITE DATA FORM

SG+10

Site No. ______________ Date ______________
Omn ______________

Material ______________ County ______________
Fine Sand, Sand & Gravel Republic ______________

Location ______________ Sec. ______________ Top. ______________ Range ______________
E½ NW½ 22 2S 3W ______________

Owner ______________ Name ______________
Chas Hanzlick Belleville, Kansas ______________

Nature of Deposit ______________ Accessibility ______________ Site Located on Platte ______________
Dry Good V ______________

Status of Site ______________
Open Materials Site; Sampled ______________

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test No.</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
<th>Mesh 200</th>
<th>G.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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<tbody>
<tr>
<td>1</td>
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<td>0 6 27 60 83 91 7</td>
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<td>4</td>
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<td>20</td>
<td>3</td>
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CORRELATION DATA

Geological Age ______________
Quaternary ______________

Geological Source ______________
Meade Formation ______________

Material Similar To ______________

Specific Gravity (Sat.) ______________ (Dry) ______________

Los Angeles Wear ______________

Absorption ______________ Soundness ______________

St. Cu.Ft. ______________ Str. Ratio ______________

Remarks ______________
KDOT Materials Department Site No. 79-18 Inactive Pit. ______________

Insufficient quantity for quality test. 1 & 4 represent the finest and coarsest material that has been sampled at this site. ______________

Scale: 1" = ½ mile
**MATERIAL SITE DATA FORM**

**Site No.**

SG+11

**Date**

April, 1976

**Material**

Sand & Gravel

**County**

Republic

**Location**

SE1/4 Sec. 15 Twp. 2S Range 2W

**Owner**

Eugene Hamel

Munden, Kansas

**Nature of Deposit**

Dry

**Accessibility**

Fair

Site Located on Plate VI

**Status of Site**

Open Materials Site; Sampled

---

### EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Datum of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
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</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>Clay</td>
<td>4</td>
<td>19</td>
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</table>

### CORRELATION DATA

**Geological Age**
Quaternary

**Geological Source**
Meade Formation

**Material Similar To**
KDOT Lab No. 62071

**Specific Gravity (Pat.)**
2.59 (Dry)

**Los Angeles Wear**
36(D)

**Absorption**
1.028

**Soundness**
0.96

**Remarks**
KDOT Materials Department Site No. 79-1

2 & 3 represent the finest and coarsest material that has been sampled at this site.
# Material Site Data Form

**Site No.** SG+12  
**Qm**

**Date** April, 1976

**Material** Sand & Gravel  
**County** Republic

**Location** NE^4  
**Sec.** 23  
**Twp.** 25  
**Range** 2W

**Owner** Frank Filinger  
**Cuba, Kansas**

**Nature of Deposit** Dry  
**Accessibility** Good  
**Site Located on Plate** VI

**Status of Site** Open Materials Site; Sampled

## Exploration Data

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
<th>Moist 200</th>
<th>B.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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<tbody>
<tr>
<td>51A Sand</td>
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<td>0 1 8 14 26 42</td>
<td>.91 25</td>
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<td>43 Sand</td>
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<td>7</td>
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</table>

## Correlation Data

**Geological Age** Quaternary  
**Geological Source** Meade Formation

**Material Similar To**

**Specific Gravity (Sat.)**

**Los Angeles Wear**

**Absorption**

**Soundness**

**St. Co.Ft.**

**Str. Ratio**

**Remarks** KDOT Materials Department Site No. 79-5, 51A & 43 represent the finest and coarsest material that has been sampled at this site.
**MATERIAL SITE DATA FORM**

**Site No.** SG+13  
**Date** April, 1976

**Material** Sand & Gravel  
**County** Republic

**Location** SW1/4  
**Sec.** 24  
**Twp.** 2S  
**Range** 2W

**Owner** C. E. Heina  
**Address** Cuba, Kansas

**Nature of Deposit** Dry  
**Accessibility** Good  
**Site Located on Plate** VI

**Status of Site** Open Materials Site, Sampled

### EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
<th>Depth of Material</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1/2</td>
<td>3/4</td>
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<tr>
<td>6</td>
<td>Clay</td>
<td>6</td>
<td>13</td>
<td>0</td>
</tr>
</tbody>
</table>

### CORRELATION DATA

**Geological Age** Quaternary

**Geological Source** Meade Formation

**Material Similar To** KDOT Lab. No. 75-1092

**Specific Gravity (Sat.)** 2.60 II  
**(Dry)**

**Los Angeles Wear** 49(D)

**Absorption** 0.3  
**Soundness** 0.96

**Wt. Co.Ft.**  
**Str. Ratio**

**Remarks** KDOT Materials Department Site No. 79-3. 27 & 6 represent the finest and coarsest material that has been sampled at this site.
**Material Site Data Form**

**Site No.** SG+14  
**Date** April, 1976

**Material** Sand & Gravel  
**County** Republic

**Location** NE $\frac{1}{4}$ SE $\frac{1}{4}$ & E $\frac{1}{4}$ NE $\frac{1}{4}$  
**Sec.** 19  
**Twp.** 25  
**Range** 1W

**Owner** Frank Bartak  
**Address** R.R. Cuba, Kansas

**Nature of Deposit** Dry  
**Accessibility** Good  
**Site Located on Plate** VI

**Status of Site** Open Materials Site; Sampled

### Exploration Data

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Top of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td>1/2 1/4 1/8 1/8 4 8 16 30 50 100 Wash 200 G.F. L.L. P.I.</td>
</tr>
<tr>
<td>9</td>
<td>Clay</td>
<td>19</td>
<td>0 1 5 21 47 76 89 9 2.39 18 3</td>
</tr>
<tr>
<td>14</td>
<td>Shale</td>
<td>3</td>
<td>0 5 28 61 82 92 95 4 3.63 30 14</td>
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</tbody>
</table>

### Correlation Data

**Geological Age** Quaternary

**Geological Source** Meade Formation

**Material Similar To** KDOT Lab. No. 75-1091

**Specific Gravity (Sat.)** 2.56  
**Specific Gravity (Dry)** 2.60  
**Los Angeles Wear** 44(D)

**Absorption** 0.3  
**Soundness** 0.97

**Ht. Cu.Ft.**  
**Str. Ratio**

**Remarks** KDOT Materials Department Site No. 79-16. 9 & 14 represent the finest and coarsest material that has been sampled at this site.

Scale: 1" = $\frac{1}{4}$ mile
MATERIAL SITE DATA FORM

Site No. __________ Date __________

Material: Sandstone
County: Republic

Location: NE 4, NE 4
Sec.: 27
Twp.: 2S
Range: 1W

Owner: Edward Havel
Address: Narka, Kansas

Nature of Deposit: Dry
Accessibility: Good
Site Located on Plate: VI

Status of Site: Open Materials Site; Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
<th>Bulk Density 200</th>
<th>B.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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CORRELATION DATA

Geological Age: Cretaceous
Geological Source: Dakota Formation

Material Similar To

Specific Gravity (Sat.): __________ (Dry): __________

Los Angeles Wear

Absorption

Soundness

Ut. Co./Ft.

Str. Ratio

Remarks: KDOT Materials Department Site No. 79-10

Scale: 1" = ¼ mile
**MATERIAL SITE DATA FORM**

**Site No.** SG+16  
**Qm**  
**Date** April, 1976  

**Material** Sand & Gravel  
**County** Republic  
**NE 4 NW 4** Sec. 26  
**Top.** 25  
**Range** 1W

**Owner** Edward Havel  
**Address** Narka, Kansas  
**Nature of Deposit** Dry  
**Accessibility** Good  
**Status of Site** Open Materials Site; Sampled

### EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at bottom of Hole</th>
<th>Depth of overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
<th>Grav. 200</th>
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<th>L.L.</th>
<th>P.I.</th>
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<tbody>
<tr>
<td>11</td>
<td>Clay</td>
<td>6 3</td>
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<td>0 2 5 15 34 57</td>
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<tr>
<td>1</td>
<td>Shale</td>
<td>2 9.5 0</td>
<td>2 6 10 22 46 68 80 90</td>
<td>9 3.24</td>
<td>18 4</td>
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### CORRELATION DATA

**Geological Age** Quaternary  
**Geological Source** Meade Formation  
**Material Similar To**  
**Specific Gravity (Sat.)** (Dry)  
**Los Angeles Wear**  
**Absorption** Soundness  
**M. Co.Ft.** Str. Ratio

**Remarks** KDOT Materials Department Site No. 79-4. 11 & 1 represent the finest and coarsest material that has been sampled at this site.

**Scale:** 1" = ¼ mile  
**Note:** Part of pit located in SE 4 SW 4 sec. 23T. 25., R.1W.
MATERIAL SITE DATA FORM

SG+16
Quin

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Date</th>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Material</th>
<th>County</th>
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<tbody>
<tr>
<td>Sand &amp; Gravel</td>
<td>Republic</td>
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<tr>
<th>Location</th>
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<table>
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<th>Owner</th>
<th>Address</th>
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<tr>
<td>George McKenna</td>
<td>Tulsa, Oklahoma</td>
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<table>
<thead>
<tr>
<th>Nature of Deposit</th>
<th>Accessibility</th>
<th>Site Located On Plate</th>
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<tbody>
<tr>
<td>Dry</td>
<td>Good</td>
<td>VI</td>
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<table>
<thead>
<tr>
<th>Status of Site</th>
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<tbody>
<tr>
<td>Open Materials Site; Sampled</td>
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### EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
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<tbody>
<tr>
<td></td>
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### CORRELATION DATA

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<tr>
<td>Quaternary</td>
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<tr>
<td>Meade Formation</td>
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<th>Material Similar To</th>
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<thead>
<tr>
<th>Specific Gravity (Sat.)</th>
<th>(Dry)</th>
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<th>Los Angeles Hardness</th>
<th>Soundness</th>
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<tr>
<th>Absorption</th>
<th>Btu. Co.Ft.</th>
<th>Str. Ratio</th>
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Remarks: KDOT Materials Department Site No. 79-4. 11 & 1 represent the finest and coarsest material that has been sampled at this site.

Scale: 1" = 1/4 mile

Note: Part of pit located in NE\text{\textsuperscript{1/2}} NW\text{\textsuperscript{1/2}}
Sec 26 T.2S., R.1W.
OPEN MATERIALS SITES; NOT SAMPLED

LEGEND

======== Trail or lane

Road

Railroad

Hedge or trees

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

Center of section

Dwelling

Cemetery

School

Church

Town or city
MATERIAL SITE DATA FORM

SG+17
Qt

Site No.   Date   April, 1976

Sand & Gravel

County   Republic

Location   Sec.  18   Tup.  1S   Range  5W

Owner   Mrs. George Powell

Address   Mesa, Arizona

Nature of Deposit   Dry

Accessibility   Good

Site Located on Plate   I

Status of Site   Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at bottom of Hole</th>
<th>Depth of overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
<th>Wash 200</th>
<th>G.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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</table>

CORRELATION DATA

Geological Age   Quaternary

Geological Source   Wisconsin Terrace

Material Similar To

Specific Gravity (Sat.)

Los Angeles Wear

Absorption

Soundness

Mt. Co.Ft.

Str. Ratio

Remarks

Scale: 1" = 1/4 mile
MATERIAL SITE DATA FORM

SG+18  
Qds

Site No.  Date  April, 1976

Sand & Gravel  County  Republic

Location  Sec. 20  Twp. 1S  Range 4W

Howard Miller  Republic, Kansas

Owner

Nature of Deposit  Wet  Accessibility  Good  Site Located on Plate I

Status of Site  Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
<th>1/2</th>
<th>3/8</th>
<th>1/4</th>
<th>3/16</th>
<th>1/8</th>
<th>1/4</th>
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</table>

CORRELATION DATA

Geological Age  Quaternary

Geological Source  Dune Sand

Material Similar To

Specific Gravity (Sat.)  (Dry)

Los Angeles Wear

Absorption  Soundness

Ft. Cu. Ft.  Str. Ratio

Remarks

Scale: 1" = 1/4 mile
**MATERIAL SITE DATA FORM**

<table>
<thead>
<tr>
<th>Site No.</th>
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<tbody>
<tr>
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<td>E12 NE14 3S 15S 1W</td>
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<tr>
<td>Owner</td>
<td>Frank Ceny Narka, Kansas</td>
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<tr>
<td>Nature of Deposit</td>
<td>Dry Good</td>
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<td>Status of Site</td>
<td>Open Materials Site; Not Sampled</td>
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**EXPLORATION DATA**

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<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Depth of Material</th>
<th>1/2</th>
<th>2/4</th>
<th>3/8</th>
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<th>100</th>
<th>Wash 200</th>
<th>s.f.</th>
<th>L.t.</th>
<th>P.i.</th>
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</table>

**CORRELATION DATA**

- Geological Age: Cretaceous
- Geological Source: Greenhorn Limestone Formation
- Material Similar To:
- Specific Gravity (Sat.) (Dry):
- Los Angeles Wear:
- Absorption:
- Soundness:
- Wt. Co.Ft.:
- Str. Ratio:
- Remarks:

Scale: 1" = 1/4 mile
MATERIAL SITE DATA FORM

Site No. SG+20  Qm  Date April, 1976
Material Sand & Gravel  County Republic
Location SE\(\frac{1}{4}\)  Sec. 21  Twp. 2S  Range 3W
Owner Ernest Mikesell  Address Republic, Kansas
Nature of Deposit Dry  Accessibility Fair  Site Located on Plate V
Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Material at Bottom of Hole</th>
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<th>Percent Retained</th>
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CORRELATION DATA

Geological Age Quaternary
Geological Source Meade Formation
Material Similar To

Specific Gravity (Sat.) (Dry)
Los Angeles Wear
Assorption Boundness
Wt. Cu.Ft. Str. Ratio
Remarks

Scale: 1" = \(\frac{1}{4}\) mile
**MATERIAL SITE DATA FORM**

---

**Site No.** SG-21  
**Date** April, 1976  
**Material** Sand & Gravel  
**County** Republic  
**Location** SE1/4 SE1/4  
**Sec.** 32  
**Twp.** 2S  
**Range** 2W  
**Marveleta Janasek**  
**Belleville, Kansas**  

---

**Nature of Deposit** Dry  
**Accessibility** Good  
**Site Located on Plate** V  
**Status of Site** Open Materials Site; Not Sampled

---

### EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
<th>Wash 200</th>
<th>S.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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### CORRELATION DATA

**Geological Age** Quaternary  
**Geological Source** Wisconsinan Terrace  
**Material Similar To**  

---

**Specific Gravity (Sat.)** (Dry)  
**Los Angeles Wear**  
**Absorption**  
**Soundness**  
**M. Co.Ft.**  
**Str. Ratio**  
**Remarks**

---

**Scale:** 1" = 1/4 mile
MATERIAL SITE DATA FORM

SG+23

Qm

Site No. Date April, 1976

Sand & Gravel County Republic

Material Location Sec. 23 Twp. 25 Range 2W

Frank Filinger Cuba, Kansas

Owner

Nature of Deposit Dry Accessibility Poor Site Located on Plate 6

Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
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<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
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<th>L.L.</th>
<th>P.I.</th>
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CORRELATION DATA

Geological Age Quaternary

Geological Source Meade Formation

Material Similar To

Specific Gravity (Sat.)

Los Angeles Wear

Absorption

U. S. Ft. Str. Ratio

Remarks

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

SG+24
Qm

Date April, 1976

Sand & Gravel
Country Republic

Location NE4 Sec. 23 Twp. 25 Range 2W

Owner
Frank Filinger
Cuba, Kansas

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open Materials Sites; Not Sampled

EXPLORATION DATA

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<th>C.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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</table>

CORRELATION DATA

Geological Age Quaternary
Geological Source Meade Formation
Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

M. Co.Ft. Str. Ratio

Remarks

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

SG-25
Qm

Site No.        Date        April, 1976
Sand & Gravel  County  Republic
Location        Sec. 24  Twp. 2S  Range 2W
Owner           Henry Starnad  Munden, Kansas
Nature of Deposit  Dry  Accessibility  Fair  Site Located on Plate VI
Status of Site  Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Material at Bottom of Hole</th>
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CORRELATION DATA

Geological Age  Quaternary
Geological Source  Meade Formation
Material Similar To
Specific Gravity (Sat.)  (Dry)
Los Angeles Wear
Absorption  Soundness
Wt. Cu.Ft.  Str. Ratio
Remarks

Scale: 1" = ¼ mile
SG-26
Qm
April, 1976

Material: Sand & Gravel
County: Republic
Location: NE 1/4 Sec. 24 Top. 25 Range 2W
Owner: Henry Starnad
Munden, Kansas
Nature of Deposit: Dry
Accessibility: Good
Status of Site: Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Material</th>
<th>Depth of Overburden</th>
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CORRELATION DATA

Geological Age: Quaternary
Meade Formation

Material Similar To:

Specific Gravity (Sat.): (Dry)

Los Angeles Wear:

Absorption:
Soundness:

Wt. Co.Ft.:
Str. Ratio:

Remarks:

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

SG-27

Site No.  Qm

Date  April, 1976

Material  Sand & Gravel

County  Republic

Location  W\textsubscript{1/2} SW\textsubscript{1/4} Sec. 19 Twp. 2S Range 1W

Owner  Brendalu Fillinger, Jr.

Address  Cuba, Kansas

Nature of Deposit  Open Materials Site

Accessibility  Not Sampled

Site Located on Plate  VI

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
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<tbody>
<tr>
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</table>

CORRELATION DATA

Geological Age  Quaternary

Geological Source  Meade Formation

Material Similar To

Specific Gravity (Sat.)  (Dry)

Los Angeles Wear

Absorption  Soundness

Min. CS. Ft.  Str. Ratio

Remarks

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

SG-28
Qm

Date
April, 1976

Material
Sand & Gravel

County
Republic

Location
NW\text{\textdegree}_4
Sec. 20
Top. 2S
Range 1W

Owner
Anna M. Kadlets
Belleville, Kansas

Nature of Deposit
Dry
Accessibility
Fair

Site Located on Plate
VI

Status of Site
Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material of Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
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<th>3/4</th>
<th>1%</th>
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<th>20%</th>
<th>50%</th>
<th>100%</th>
<th>S.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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</table>

CORRELATION DATA

Geological Age
Quaternary

Geological Source
Meade Formation

Material Similar To

Specific Gravity (Sat.)

Los Angeles Wear

Absorption

Soundness

Wt. Cu.Ft.

Str. Ratio

Remarks
MATERIAL SITE DATA FORM

SG-29

Qm

Sand & Gravel

Republic

Location

SW 4

Sec. 24

Twp. 2S

Range 1W

Francis Griswold

Haddam, Kansas

Nature of Deposit

Dry

Accessibility

Poor

Site Located on Plate VI

Status of Site

Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
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</thead>
<tbody>
<tr>
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</table>

CORRELATION DATA

Geological Age

Quaternary

Geological Source

Meade Formation

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption

Soundness

Wt. Co.Ft.

Str. Ratio

Remarks

Scale: 1" = ¼ mile
**MATERIAL SITE DATA FORM**

Site No. SG-30  
Date April, 1976  
County Republic  
Location SW 1/4 Sec. 34 Twp. 25 Range 2W  
Owner Donald Wearer  
Address Belleville, Kansas  
Nature of Deposit Dry  
Accessibility Good  
Status of Site Open Materials Site; Not Sampled

**EXPLORATION DATA**

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
<th>Wash 200</th>
<th>G.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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**CORRELATION DATA**

Geological Age Quaternary  
Geological Source Meade Formation  
Material Similar To  
Specific Gravity (Sat.) (Dry)  
Los Angeles Wear  
Absorption  
Soundness  
Wt. Cu.Ft.  
Str. Ratio  
Remarks  

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

Ls+31
Kg

Site No. __________________________ Date __________________________

Material Limestone
County Republic

Location N45 Sec. 18 Twp. 4S Range 5W

Owner Ray G. Nelson, Trustee
Address Courtland, Kansas

Nature of Deposit Dry
Accessibility Good

Site Located on Plate VII

Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at bottom of Hole</th>
<th>Depth of overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
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<th>3/4</th>
<th>5/8</th>
<th>3/8</th>
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<th>16</th>
<th>30</th>
<th>50</th>
<th>100</th>
<th>Wash</th>
<th>S.F.</th>
<th>L.L.</th>
<th>P.I.</th>
</tr>
</thead>
</table>

CORRELATION DATA

Geological Age Cretaceous

Geological Source Greenhorn Limestone Formation

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Hardness

Absorption Soundness

Mt. Cu.Ft. Str. Ratio

Remarks

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

Site No. Ls+32 Kg
Date April, 1976

Material Limestone
County Republic

Location SW1/4 Sec. 10 Twp. 4S Range 4W

Owner Harold D. Melhus
Address Scandia, Kansas

Nature of Deposit Dry
Accessibility Good
Site Located on Plate VII

Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at bottom of Hole</th>
<th>Depth of Material</th>
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</table>

Percent Retained

1/16 | 1/4 | 1/2 | 3/8 | 5/8 | 11/16 | 1 | 5 | 10 | 50 | 100 | Mesh 200 | G.F. | L.L. | P.I. |
|      |     |     |     |     |       |    |    |    |     |     |         |     |     |     |

CORRELATION DATA

Geological Age Cretaceous
Geological Source Greenhorn Limestone Formation

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Co.Ft. Str. Ratio

Remarks

Scale: 1" = 1/4 mile
**MATERIAL SITE DATA FORM**

**Site No.** Ls+33  
**Date** April, 1976

**Material** Limestone and Shale  
**County** Republic

**Location** SW1/4 SW1/4  
**Twp.** 27  
**Range** 4S  
**Sec.** 5W

**Owner** Darrell & Shirley Larson  
**Jamestown, Kansas**

**Nature of Deposit** Dry  
**Accessibility** Good  
**Site Located on Plate VII**

**Status of Site** Open Materials Site; Not Sampled

### Exploration Data

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
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### Correlation Data

**Geological Age** Cretaceous  
**Geological Source** Greenhorn Limestone

**Material Similar To**

**Specific Gravity (Sat.)** (Dry)

**Los Angeles Wear**

**Absorption**

**Soundness**

**Wt. Cu.Ft.**

**Str. Ratio**

**Remarks**

---

**Scale:** 1" = 1/4 mile
**MATERIAL SITE DATA FORM**

**Site No.** Kg  
**Date** April, 1976  
**Material** Limestone and Shale  
**County** Republic  
**Location** N\(^{32}\) SW\(^{32}\) Sec. 31 Twp. 4S Range 5W  
**Owner** Jay Petersen  
**Address** Jamestown, Kansas  
**Nature of Deposit** Dry  
**Accessibility** Good  
**Site Located on Plate** VII  
**Status of Site** Open Materials Site: Not Sampled

### EXPLORATION DATA

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<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
<th>Wash 200</th>
<th>G.F.</th>
<th>L.L.</th>
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### CORRELATION DATA

**Geological Age** Cretaceous  
**Geological Source** Greenhorn Limestone Formation  
**Material Similar To**  
**Specific Gravity (Sat.)** (Dry)  
**Los Angeles Wear**  
**Absorption** Soundness  
**Wt. Co.Ft.**  
**St. Ratio**  
**Remarks**

**Scale:** 1" = 1\(\frac{1}{4}\) mile
MATERIAL SITE DATA FORM

Site No. Kg
Date April, 1976
Material Limestone
County Republic
Location 3/2 SE33 Sec. 33 Twp. 35 Range 3W
Owner Glenn Kasl
Address Belleville, Kansas
Nature of Deposit Dry
Accessibility Good
Site Located on Plate VIII
Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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<th>Material at Bottom of Hole</th>
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<th>Percent Retained</th>
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Wash 200 L.F. L.L. P.I.

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CORRELATION DATA

Geological Age Cretaceous
Geological Source Greenhorn Limestone Formation
Material Similar To
Specific Gravity (Sat.) (Dry)
Los Angeles Wear
Absorption
Soundness
Wt. Cu.Ft.
Str. Ratio
Remarks

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

Site No. Ls+36
Kg

Date April, 1976

Material Limestone

County Republic

Location SE ¼ Sec. 6 Twp. 4S Range 2W

Owner Mary Cousins

Belleville, Kansas

Nature of Deposit Dry

Accessibility Fair

Site Located on Plate VIII

Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
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Cretaceous

CORRELATION DATA

Geological Age Cretaceous

Geological Source Greenhorn Limestone Formation

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

St. Cfu. Str. Ratio

Remarks

Scale: 1" = ¼ mile
**Materials Site Data Form**

- **Site No.:** Ls+37
- **Kg:** 148
- **Material:** Limestone
- **County:** Republic
- **Location:** NW^3 Sec. 20 Twp. 4S Range 3W
- **Owner:** Martha Johnson
- **Address:** Concordia, Kansas
- **Nature of Deposit:** Dry
- **Accessibility:** Good
- **Site Located on Plate:** VIII
- **Status of Site:** Open Materials Site; Not Sampled

### Exploration Data

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<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Depth of Material</th>
<th>Percent Retained</th>
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<th>L.T.</th>
<th>F.I.</th>
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</table>

### Correlation Data

- **Geological Age:** Cretaceous
- **Geological Source:** Greenhorn Limestone Formation
- **Material Similar To:**
- **Specific Gravity (Sat.):** (Dry)
- **Los Angeles Wear:**
- **Absorption:**
- **Soundness:**
- **Wt. Co.Ft.:**
- **Str. Ratio:**
- **Remarks:**

**Scale:** 1" = ¼ mile
MATERIAL SITE DATA FORM

Site No. Ls+38  
Kg  
Date April, 1976

Material Limestone and Shale
County Republic

Location SE 4
Sec. 31  
Twp. 4S  
Range 3W

Owner Joe Budreau
Concordia, Kansas

Nature of Deposit Dry
Accessibility Good

Status of Site Open Materials Sites; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test No.</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Material</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
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Wash 200 B.F. L.L. P.I.

CORRELATION DATA

Geological Age Cretaceous

Geological Source Greenhorn Limestone Formation

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Co.Ft. Str. Ratio

Remarks

Scale: 1" = ¼ mile
**Material Site Data Form**

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<th>Site No.</th>
<th>Limestone</th>
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<tr>
<td>Kg</td>
<td>Republic</td>
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<td>Location</td>
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<td>Owner</td>
<td>Joe Cibolski</td>
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<td>Status of Site</td>
<td>Open Materials Site; Not Sampled</td>
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**Extraction Data**

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<th>Material</th>
<th>Depth of</th>
<th>Depth</th>
<th>Percent Retained</th>
<th>Wash</th>
<th>G.F.</th>
<th>L.T.</th>
<th>P.I.</th>
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<tbody>
<tr>
<td>Hole</td>
<td>Bottom of Hole</td>
<td>Overburden</td>
<td>Material</td>
<td>1/2</td>
<td>3/4</td>
<td>3/8</td>
<td>5</td>
<td>8</td>
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**Correlation Data**

- Geological Age: Cretaceous
- Geological Source: Greenhorn Limestone Formation
- Material Similar To:
- Specific Gravity (Sat.) (Dry)
- Los Angeles Wear
- Absorption Soundness
- Mt. Co.Ft. Str. Ratio

Scale: 1" = ¼ mile
MATERIAL SITE DATA FORM

Ls+40 Kg

Date: April, 1976

Material: Limestone
County: Republic

Location: E1/2 NW1/4 NW1/4 & NE1/4 NW1/4 Sec. 13 Twp. 4S Range 2W

Owner: Loren Hammer
Address: Agenda, Kansas

Nature of Deposit: Dry
Accessibility: Good
Site Located on Plate IX

Status of Site: Open Materials Site; Not Sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test No.</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Depth of Material</th>
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<th>Wash</th>
<th>S.F.</th>
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CORRELATION DATA

Geological Age: Cretaceous
Geological Source: Greenhorn Limestone Formation

Material Similar To:

Specific Gravity (Sat.): (Dry)

Los Angeles Wear

Absorption

Soundness

Mt. Cr. Ft.

Str. Ratio

Remarks

Scale: 1" = 1/4 mile
PROSPECTIVE MATERIALS SITES; SAMPLED

LEGEND

===== Trail or lane

Road

Railroad

Hedge or trees

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

⊙ Center of section

□ Dwelling

▲ Cemetery

▲ School

▲ Church

□ Town or city
Si-41

Site No. Qt. Date April, 1976
Material Silt County Republic
Location SE ¼ Sec. 2 Twp. 3S Range 1W
Owner Eugene C. Hadachek Cuba, Kansas
Nature of Deposit Dry Accessibility Good Site Located on Plate VI
Status of Site Prospective Materials Site; Sampled

EXPLORATION DATA

<table>
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<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
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<th>Wash 200</th>
<th>G.F.</th>
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</table>

CURATION DATA

Geological Age Quaternary
Geological Source Wisconsinan Terrace

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear Soundness

Wt. Cu.Ft. Str. Ratio

Remarks KDOT Materials Department Site No. 79-6

Scale: 1" = 1/4 mile
**MATERIAL SITE DATA FORM**

**Site No.** SG+42  
**Date** April, 1976

**Material** Sand & Gravel  
**County** Republic

**Location** NE 1/4  
Sec. 18  
Twp. 3S  
Range 4W

**Owner** Andy Thompson  
Courtland, Kansas

**Nature of Deposit** Wet  
**Accessibility** Good  
Site Located on Plate IV

**Status of Site** Prospective Materials Site; Sampled

---

### EXPLORATION DATA

<table>
<thead>
<tr>
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<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
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### CORRELATION DATA

**Geological Age** Quaternary

**Geological Source** Alluvium

**Material**

**Specific Gravity (Sat.)** (Dry)

**Los Angeles Wear**

**Absorption**

**Soundness**

**Sft. C.f.t.**

**Str. Ratio**

**Remarks** KDOT Materials Department Site No. 79-9

---

*Scale: 1" = ¹⁄₄ mile*
PROSPECTIVE MATERIALS SITES; NOT SAMPLED

LEGEND

Trail or lane

Road

Railroad

Hedge or trees

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

Center of section

Dwelling

Cemetery

School

Church

Town or city
**MATERIAL SITE DATA FORM**

SG+43

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**Material**  | Republic  
**County**  
**Location**  | Sec. 18  
**Twp.** 1S  
**Range** 5W  
**Owner**  | Everett & Evelyn Sweet  
Hardy, Nebraska  
**Nature of Deposit**  
**Accessibility**  
**Site Located on Plate**  
**Status of Site**  | Prospective Materials Site; Not Sampled

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**EXPLORATION DATA**

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<th>Test Hole</th>
<th>Material at bottom of Hole</th>
<th>Depth of overburden</th>
<th>Depth of Material</th>
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**Wash 200 | C.F. | L.t. | P.B.**

---

**CORRELATION DATA**

**Geological Age**  | Quaternary  
**Geological Source**  | Meade Formation

**Material Similar To**  
**Specific Gravity (Sat.)**  | (Dry)  
**Los Angeles Wear**  
**Absorption**  | Soundness  
**Wt. Cuf. Ft.**  | Str. Ratio

**Remarks**

---

Scale: 1" = 1/4 mile
MATERIAL SITE DATA FORM

SG+44  
Date  April, 1976  
Qm  

Material  Sand & Gravel  
County  Republic  

Location  SW1/4  
Sec. 14  
Twp. 2S  
Range 2W  

Owner  Ben F. Opocensky  
Munden, Kansas  

Nature of Deposit  
Accessibility  
Site Located on Plate  VI  

Status of Site  Prospective Materials Site; Not Sampled

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EXPLORATION DATA

CORRELATION DATA

Geological Age  Quaternary
Geological Source  Meade Formation

Material Similar To

Specific Gravity (Sat.)  (Dry)

Los Angeles Wear

Absorption  Soundness

Mt. Cu.Ft.  Str. Ratio

Remarks

Scale: 1" = 1/4 mile
MATERIAL SITE DATA FORM

Site No. Ss-45  
Kd  
Sandstone  
County Republic  
Location E42 N43 Sec. 15  
Twp. 4S  
Range 1W  
Owner Neil & Gayle Kalivoda  
Agenda, Kansas  
Accessibility Site located on flat  
IX  
Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

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<th>Percent Retained</th>
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Correlation Data

Geological Age Cretaceous  
Geological Source Dakota Formation  
Material Similar To  
Specific Gravity (Sat.) *2.52 (Dry)  
Los Angeles Wear *38.5  
Absorption *1.88  
Soundness *.97  
Wt. Co. Ft.  
Str. Ratio  
Remarks Calcite cemented sandstone  
* Geologic Construction Material Resources in Republic County, Kansas 1948

Scale: 1" = ½ mile
MATERIAL SITE DATA FORM

Site No. Ss+46  
Kd  

Date April 1976  

Material Sandstone  

County Republic  

Location  

W1/2 NW1/4 SE1/4 SW1/4  

Sec. 17  

Twp. 4S  

Range 1W  

Owner Jerome & Marlene Kieffer  

Cuba, Kansas  

Nature of Deposit Accessory  

Site Located on Plate IX  

Status of Site Prospective Materials Site; Not Sampled  

EXPLORATION DATA

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<th>Percent Retained</th>
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CORRELATION DATA

Geological Age Cretaceous  

Geological Source Dakota Formation  

Material Similar To  

Specific Gravity (Sat.) (Dry)  

Los Angeles Wear  

Absorption  

Soundness  

Wt. Gr. Ft.  

Str. Ratio  

Remarks  

Scale: 1" = 1/4 mile
MATERIAL SITE DATA FORM

Site No.  Ss+47  Date  April, 1976
Kd

Material  Sandstone  County  Republic

Location  NW 1/4 NW 1/4  Sec. 20  Top. 4S  Range 1W

Owner  Frank Kolman  Cuba, Kansas

Nature of Deposit  Accessiblity  Site Located on Plate  IX

Status of Site  Prospective Materials Site; Not Sampled

EXPLORATION DATA

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<th>Death of Material</th>
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<th>Percent Retained</th>
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</table>

CORRELATION DATA

Geological Age  Cretaceous
Geological Source  Dakota Formation
Material Similar To  

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

Remarks  

Scale: 1" = 1/4 mile
### MATERIAL SITE DATA FORM

**Site No.** Ss+49  
**Kd**  
**Date** April, 1976  
**Material** Sandstone  
**County** Republic  
**Location** NW\(^4\)  
**Sec.** 28  
**Twp.** 4S  
**Range** 1W  
**Owner** Lloyd Bertrand  
**Agenda, Kansas**  
**Nature of Deposit**  
**Accessibility** Site Located on Plate IX  
**Status of Site** Prospective Materials Site; Not Sampled

#### EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
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#### CORRELATION DATA

**Geological Age** Cretaceous  
**Geological Source** Dakota Formation  
**Material Similar To**  
**Specific Gravity (Pat.)** (Dry)  
**Los Angeles Wear**  
**Absorption** Soundness  
**Wt. Cu.Ft.** Str. Ratio  
**Remarks**
GLOSSARY


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

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

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 are deposited.

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

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

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

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

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.

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

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

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

Disconformity: An erosional or nondepositional surface between two parallel bedding planes.
**Dune sand**: A type of blown sand that has been piled up by wind into a sand dune, usually consisting of rounded quartz grains having diameters varying from 0.1 to 1 mm.

**Eolian**: Borne, deposited, produced or eroded by the wind or wind action.

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

**Facies change**: A lateral or vertical variation in the lithologic or paleontologic characteristics of sedimentary deposits caused by a change in the depositional environment.

**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.

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

**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.

**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.

**Gpm**: Gallons per minute.

**Gradation factor**: 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.

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

Hiatus: A break or interruption in the continuity of the geologic record, such as the absence in the stratigraphic sequence of rocks that would normally be present but are missing, either because of erosion or nondeposition.

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 construction from aggregate which is not bound by water, cement, or bituminous material.


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

Loess: Material generally composed of silt-sized particles deposited by wind.


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.

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

Petroliferous: Containing or yielding petroleum.

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.

**Quartzite**: Metamorphic rock produced by recrystallization of primary quartz sandstone under heat and pressure. Term is sometimes misused for quartzose sandstones.

**Quartzose**: Sands and sandstones consisting chiefly of quartz.

**Reactive aggregate**: A siliceous aggregate whose chemical properties react with cement causing a secondary growth within the concrete.

**Sand dunes**: Loose sand piled or heaped up by the wind.

**Sedimentary quartzite**: Term locally 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.

**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 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.

**Sublittoral**: That part of the littoral zone that is between low tide and a depth of about 328 feet (100 m).

**Sweetner**: Gravel or crushed stone coarser than No. 8 sieve added to sand or sand-gravel to meet gradation specifications.

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

**Unconformity**: A substantial break or gap in the geologic record where a rock unit is overlain by another that is not next in the stratigraphic succession.
Unconsolidated deposits: Sediments that are 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.
Selected References


Byrne, Frank E. and others (1948) Geologic Construction Material Resources in Republic County, Kansas: 35 pp.


