APPENDIX I

The following site data forms are designated as "open sites; not sampled." The sites described herein are depicted on the county materials maps as a "●".

LEGEND

==--------== Trail or lane

---- Road

++++++++ Railroad

<> Hedge or trees

---- Major streams

\-
\- Intermittent streams

-- Pond or lake

● Open materials site: not sampled

○ Center of section

□ Farm site

† Cemetery

★ School

† Church

□ Town or city
MATERIAL SURVEY REPORT

Site No. LS+1 Ph
Date November, 1968
Material Limestone
County Butler
Location SW₁/₂ SW₁/₂ Sec. 25 Twp. 23S Range 3E
Owner First National Bank Topeka, Kansas
Nature of Deposit Dry
Accessibility Good
Status of Site Open 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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<tbody>
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CORRELATION DATA

Geological Age Permian
Geological Source Herington Limestone Member
Material Similar To

Specific Gravity (Sat.) (Dry)
Los Angeleswear
Absorption Soundness
Wt. Co./Pt. Str. Ratio
Remarks

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

LS-3
Pfr
Limestone
Butler

November, 1968

Location: SW¼ Sec. 2, Twp. 24S, Range 6E

Owner: Lewis Vogelman, Cassoday, Kansas

Nature of Deposit: Dry
Accessibility: Good
Site Located on Plate: II
Status of Site: Open site; not sampled

EXPLORATION DATA

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<th>Material at Bottom of Hole</th>
<th>Depth of Burden</th>
<th>Depth of Material</th>
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<th>L.</th>
<th>P.I.</th>
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CORRELATION DATA

Geological Age: Permian
Geological Source: Fort Riley Limestone Member

Specific Gravity (Sat.): 
(Dry):
Los Angeles Wear:
Assorption:
Soundness:
Net Cu Ft:
Str. Ratio:
Remarks:

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

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<th>Site No.</th>
<th>Date</th>
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<td>County</td>
<td>Butler</td>
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<tr>
<td>Location</td>
<td>Sec. 29</td>
<td>Twp. 25S Range 7E</td>
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<tr>
<td>Owner</td>
<td>R. R. 3</td>
<td>El Dorado, Kansas</td>
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<td>Nature of Deposit</td>
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EXPLORATION DATA

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<th>Depth of Overburden</th>
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<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 (Nebraskan-Kansan)

Geological Source: Chert Gravel Terrace Deposit

Material Similar To:

Specific Gravity (Sat.): (Dry)

Los Angeles Wear:

Absorption:

Wt. Cu.Ft.:

Str. Ratio:

Remarks:

Scale: 1" = ¼ Mile
**STATE HIGHWAY COMMISSION OF KANSAS**

**MATERIAL SURVEY REPORT**

CG+5  
Qnkt  

Date: November, 1968  

**Site No.**  
Chert Gravel  

**County** Butler  

**Location** SE¼  
Sec. 31  
Twp. 26S  
Range 7E  

**Owner** Katherine Lill etal, R. R. 1 Leon, Kansas  

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

**Status of Site** Open site; not sampled

---

**EXPLORATION DATA**

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<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</th>
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<th>L.L.</th>
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**CORRELATION DATA**

**Geological Age** Quaternary (Nebraskan-Kansan)  

**Geological Source** Chert Gravel Terrace Deposit  

**Material Similar To**

---

**Specific Gravity (Sat.)**

(Dry)

---

**Los Angeles Wear**

---

**Absorption**

Soundness

---

**Wt. Cu.Ft.**

---

**Str. Ratio**

---

**Remarks**

---

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. PC  
Date November, 1968

Material Limestone  
County Butler

Location SE\(\frac{1}{4}\) SE\(\frac{1}{4}\) Sec. 33  
Twp. 26S Range 4E

Owner Rayford Newman, 1562 N. Battin, Wichita, Kansas

Nature of Deposit Dry  
Accessibility Good  
Site Located on Plate V

Status of Site Open site; not sampled

EXPLORATION DATA

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<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
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</table>

CORRELATION DATA

Geological Age Permian

Geological Source Cresswell Limestone Member

Material Similar To

Specific Gravity (Sat.)   
(Dry)

Los Angeles Wear

Absorption  
Soundness

Mt. Cu.Ft.  
Str. Ratio

Remarks

Scale: 1" = \(\frac{1}{4}\) Mile
CG+7
Qnkt

Site No.  

Date  November, 1968  

Material Chert Gravel  

County Butler  

Location SW 1/4  

Sec. 35  

Twp. 27S  

Range 5E  

Owner Dan Parks  

1527 Washington  

Augusta, Kansas  

Nature of Deposit Dry  

Accessibility Good  

Site Located on Plate V  

Status of Site Open 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>
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<td>1/2</td>
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<td>5/8</td>
<td>6</td>
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<td></td>
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<td>10</td>
<td>30</td>
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<td>L.L.</td>
<td>P.L.</td>
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CORRELATION DATA  

Geological Age Quaternary (Nebraskan-Kansan)  

Geological Source Chert Gravel Terrace Deposits  

Material Similar To  

Specific Gravity (Sat.)  

(Dry)  

Los Angeles Wear  

Absorption  

Soundness  

M.C. (Ft.-)  

Str. Ratio  

Remarks  

Scale: 1" = 1/4 Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+8
Qnkt

November, 1968

Site No.  Date

Material Chert Gravel
County Butler

Location SE¼ Sec. 27 Twp. 27S Range 5E

Owner J. A. Kreeger R. R. 2 Augusta, Kansas

Nature of Deposit Dry
Accessibility Good
Site Located on Plate V

Status of Site Open site; not sampled

EXPLORATION DATA

|-----------|---------------------------|----------------------|-------------------|--------------------|-----|-----|-----|-----|------|------|------|------|------|------|------|

CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity, (Sat.)

Los Angeles Wear

Absorption

Wt. Co.Ft.

Str. Ratio

Remarks

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

CG+9
Qnkt

Site No.  Date  November, 1968
Material  Chert Gravel  County  Butler
Location  NE¼  Sec. 35  Twp. 27S  Range 5E
Owner  Byron G. Stout, 1214 E. Douglas, Wichita, Kansas
Nature of Deposit  Dry  Accessibility  Good  Site Located on Plate V
Status of Site  Open site; not sampled

EXPLORATION DATA

Test Hole  Material at Surface of Hole  Depth of Overburden  Depth of Material  Percent Retained

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

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<th>Wash 200</th>
<th>G.F.</th>
<th>L.L.</th>
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CORRELATION DATA

Geological Age  Quaternary (Nehraskan-Kansan)
Geological Source  Chert Gravel Terrace Deposit
Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption  Soundness

St. Cav.Ft.  Str. Ratio

Remarks

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

CG+10
Onktr

Site No.  Date  November, 1968

Material  Limestone  County  Butler

Location  NE 4  NE 4  Sec. 34  Twp. 27S  Range 5E

Owner  J. L. Kreeger  R. R. 2  Augusta, Kansas

Nature of Deposit  Dry  Accessibility  Good  Site Located on Plate V

Status of Site  Open site; not sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Tool</th>
<th>Drill Size</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained 1/2</th>
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<th>Percent Retained 4</th>
<th>Percent Retained 8</th>
<th>Percent Retained 16</th>
<th>Percent Retained 30</th>
<th>Percent Retained 50</th>
<th>Percent Retained 100</th>
<th>Wash 500</th>
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<th>Geological Age</th>
<th>Quaternary (Nebraskan-Kansan)</th>
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<tr>
<td>Geological Source</td>
<td>Chert Gravel Terrace Deposit</td>
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</table>

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption

Soundness

Wt. Cu.Ft.

Str. Ratio

Remarks

Scale: 1" = ¼ Mile
**MATERIAL SURVEY REPORT**

**CG+11**  
**Qnkt**

**Site No.**  
**Date** November, 1968

**Material** Chert Gravel  
**County** Butler

**Location** NW  
**Sec.** 34  
**Twp.** 27S  
**Rng.** 5E

**Owner** Glenn C. Lietzke  
**R. R. 2** Augusta, Kansas

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

**Status of Site** Open site; not sampled

---

### EXPLORATION DATA

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<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>C.F.</th>
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### CORRELATION DATA

**Geological Age** Quaternary (Nebraskan-Kansan)  
**Geological Source** Chert Gravel Terrace Deposit

**Material Similar To**

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

**Los Angeles Wear**

**Adsorption** Soundness

**Wt. Cu.Ft.** Str. Ratio

**Remarks**

---

*Scale: 1" = ½ Mile*
MATERIAL SURVEY REPORT

CG+12  
Qnkt  

Site No.  

Date  November, 1968  

Material  Chert Gravel  
County  Butler  

Location  

27S  
Sec. 33  
Range 5E  

Owner  Charles W. Clark  

R. R. 2  
Augusta, Kansas  

Nature of Deposit  Dry  
Accessibility  Good  
Site Located on Plate  V  

Status of Site  Open site; not sampled  

EXPLORATION DATA

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

Geological Age  Quaternary (Nebraskan-Kansan)  

Geological Source  Chert Gravel Terrace Deposit  

Material Similar To  

Specific Gravity (Sat.)  
(Dry)  

Los Angeles Wear  

Absorption  Soundness  

Wt. Cu.Ft.  Str. Ratio  

Remarks  

Scale: 1" = 1/4 Mile
MATERIAL SURVEY REPORT

Site No. Qalt  Date November, 1968

Material Chert Gravel  County Butler

Location NW¼ NE¼  Sec. 31  Twp. 27S  Range 6E

James J. Gilliland  Leon, Kansas

Nature of Deposit  Dry  Accessibility  Good  Site Located on Plate VI

Status of Site  Open site; not sampled

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<th>Percent Retained</th>
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CORRELATION DATA

Geological Age  Quaternary

Geological Source  Alluvium & Terrace Deposit

Material Similar To  

Specific Gravity (Dry)  

Los Angeles Wear  

Absorption  Soundness  

Wt. Cu.Ft.  Str. Ratio  

Remarks  

Scale: 1" = ¼ Mile
**MATERIAL SURVEY REPORT**

**LS-14**

**Site No.**

**Limestone**

**Material**

**Butler**

**County**

**November, 1968**

**Date**

**NW 1/4 SW 1/4**

**Location**

**Sec. 13**

**Twp. 27S**

**Range 3E**

**Willard J. Kiser, 1446 Willow Rd., Wichita 8, Kansas**

**Owner**

**Dry**

**Accessibility**

**Poor**

**Site Located on Plate V**

**Nature of Deposit**

**Open site; not sampled**

**Status of Site**

---

### EXPLORATION DATA

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<th>Material at Bottom of Hole</th>
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<th>Depth of Material</th>
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### CORRELATION DATA

**Geological Age**

**Permian**

**Geological Source**

**Herington Limestone Member**

**Material Similar To**

---

**Specific Gravity (Sat.)**

**(Dry)**

---

**Los Angeles Wear**

---

**Absorption**

**Soundness**

---

**Wt. Co.Ft.**

**Str. Ratio**

---

**Remarks**

---

**Scale:** 1" = 1/4 Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

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<td>Butler</td>
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<td>Location</td>
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See Remarks

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<th>Nature of Deposit</th>
<th>Accessibility</th>
<th>Status of Site</th>
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EXPLORATION DATA

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<th>Percent Retained</th>
<th>Wash 200</th>
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CORRELATION DATA

Geological Age | Permian
Geological Source | Cresswell Limestone Member
Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption | Soundness

Wt. Co.Ft. | Str. Ratio

James A. Morgan

Remarks

2002 Shannonhouse Rd., Huntsville, Alabama

Scale: 1" = $\frac{1}{4}$ Mile
MATERIAL SURVEY REPORT

Site No.  CG+16  Qnkt
Date  November, 1968

Material  Chert Gravel  County  Butler
Location  NE 1/4 SE 1/4  Sec. 2  Twp. 27S  Range 6E
Owner  See Remarks
Nature of Deposit  Dry  Accessibility  Good  Site Located on Plate  VI
Status of Site  Open site; not sampled

EXPLORATION DATA

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<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained 1/2</th>
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<th>3/8</th>
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<th>8</th>
<th>16</th>
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<th>50</th>
<th>100</th>
<th>Wash 200</th>
<th>S.F.</th>
<th>L.L.</th>
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CORRELATION DATA

Geological Age  Quaternary (Nebraskan-Kansan)
Geological Source  Chert Gravel Terrace Deposit
Material Similar To  
Specific Gravity (Sat.)  (Dry)
Los Angeles Wear  
Absorption  Soundness  
Wt. Co.Ft.  Str. Ratio  
Remarks  Alice Coleman & Grace Dixon  
120 N. Myrtle, Eureka, Kansas

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+17 Qnkt

Site No. Date November, 1968

Material Chert Gravel County Butler

Location SW¼ SW¼ Sec. 1 Twp. 27S Range 6E

Owner Hannah McCoy Dixon, R. R. 2, Leon, Kansas

Nature of Deposit Dry Accessibility Good Site Located on Plate VI

Status of Site Open site; not sampled

EXPLORATION DATA

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<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>B.F.</th>
<th>L.I.</th>
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CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu. Ft. Str. Ratio

Remarks

Scale: 1" = ¼ Mile
**MATERIAL SURVEY REPORT**

**CG-18 Onkt**

**Site No.**

**Date** November, 1968

**Material** Chert Gravel

**County** Butler

**Location** SW¼ SW¼ Sec. 15 Twp. 27S Range 6E

**Owner** H. H. Marshall estate

**Leon, Kansas**

**Nature of Deposit** Dry

**Accessibility** Good

**Site Located on Plate** VI

**Status of Site** Open site; not sampled

### EXPLORATION DATA

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<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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### CORRELATION DATA

**Geological Age** Quaternary (Nebraskan-Kansan)

**Geological Source** Chert Gravel Terrace Deposit

**Material Similar To**

**Specific Gravity (Sat.)**

**Los Angeles Wear**

**Absorption**

**Soundness**

**Wt. Co.Ft.**

**Str. Ratio**

**Remarks**

---

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

RC+19
Pf

Site No. Date November, 1968
Residual Chert County Butler

Material

Location Sec. 9 Twp. 27 S Range 8 E

NW\(\frac{1}{4}\) NE\(\frac{1}{4}\)

Owner K. T. Wiedeman, Box 1276, El Dorado, Kansas
Name
Address

Nature of Deposit Dry
Accessibility Fair

Site Located on Plate VI

Status of Site Open site; not sampled

EXPLORATION DATA

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CORRELATION DATA

Geological Age Permian

Geological Source Florence Limestone Member

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu./Ft. Str. Ratio

Remarks

Scale: 1" = \(\frac{1}{4}\) Mile
MATERIAL SURVEY REPORT

CG+21
Onkt

Site No. Date November, 1968

Chert Gravel Butler

Material County

NE\(\frac{1}{4}\) NW\(\frac{1}{4}\) Sec. 8 Twp. 28S Range 5E

Location

Bill C. Carr R. R. 2 Augusta, Kansas

Owner name address

Nature of Deposit Accessibility Site Located on Plate

Dry Good V

Status of Site Open site; not sampled

EXPLORATION DATA

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<th>Depth of overburden</th>
<th>Percent Retained</th>
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CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu.Ft. Str. Ratio

Remarks

Scale: 1" = \(\frac{1}{2}\) Mile
MATERIAL SURVEY REPORT

CG+22
Qnkt

Chert Gravel

Butler

Site No.          Date    November, 1968

Material          County

Location          Sec.  3     Two.  28S       Range  5E

Grace Lietzke, 144 E. Broadway, Augusta, Kansas

Owner              Name

Nature of Deposit    Accessibility

Dry                Good

Status of Site

Open site; not sampled

EXPLORATION DATA

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<th>Depth of Overburden</th>
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<th>Percent Retained</th>
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<th>L.T.</th>
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CORRELATION DATA

Geological Age    Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption        Soundness

Wt. Cu.Ft.        Str. Ratio

Remarks

Scale: 1" = ¹⁄₄ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+23
Qnkt

Site No. ___________________________ Date ___________________________

Material Chert Gravel County Butler

Location NE ¼ SW ¼ Sec. 5 Twp. 28S Range 5E

Owner E. C. Wager R. R. 2 Augusta, Kansas

Nature of Deposit Dry Accessibility Good Site Located on Plate V

Status of Site Open site; not sampled

EXPLORATION DATA

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<th>Depth of Material</th>
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CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Co.Ft. Str. Ratio

Remarks

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

Site No.       Date       November, 1968

Material       Limestone
County        Butler
Location      SW¼ NW¼  Sec. 12   Twp. 28S   Range 3E

See Remarks

Nature of Deposit     Dry
Accessibility        Fair
Site Located on Plate V

Status of Site   Open site; not sampled

EXPLORATION DATA

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CORRELATION DATA

Geological Age        Permian
Geological Source    Cresswell Limestone Member
Material Similar To

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

Remarks
Raft Inc., & Wichita City Teachers Assn.
1220 E. Kellogg, Wichita, Kansas

scale: 1" = 1/4 Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+25

PC

Site No. ______________________ Date ________

November, 1968

Limestone County ____________ Butler

Location Sec. ______________________ Top. ______________________ Range ________

SE 1/4 Sec. 12 Top. 28S Range 3E

Boyd Gertrude, 407 S. Pershing, Wichita 8, Kansas

Owner _______________ Name _______________ Address ______________________

Nature of Deposit ______________________ Accessibility ______________________

Dry Poor Site Located on Plate V

Status of Site ______________________

Open site; not sampled

EXPLORATION DATA

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CORRELATION DATA

Geological Age ______________________

Permian

Geological Source ______________________

Cresswell Limestone Member

Material Similar To ______________________

Specific Gravity (Sat.) ______________________ (Dry)

Los Angeles Wear ______________________

Absorption ______________________ Soundness

Wt. Cu.Ft. ______________________ Str. Ratio

Remarks ______________________

Scale: 1" = ½ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+26
Pfr

Site No.  Date  November, 1968

Material  Limestone  County  Butler

Location  NE  NW  Sec.  Twp.  Range

O. L. Winters  R. R. 3  Augusta, Kansas

Owner  Name  Address

Nature of Deposit  Dry  Accessibility  Good  Site Located on Plate  VII

Status of Site  Open site; not sampled

EXPLORATION DATA

| Test Hole | Material at Bottom of Hole | Depth of Overburden
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CORRELATION DATA

Geological Age  Permian

Geological Source  Fort Riley Limestone Member

Material Similar To

Specific Gravity (Sat.)  (Dry)

Los Angeles Wear

Absorption  Soundness

Wt. Cu.Ft.  Str. Ratio

Remarks

Scale: 1" = 1/4 Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+27  
Pfr

Site No.   Date  November, 1968

Material  Limestone 
County  Butler

Location  NE 1/4  Sec. 8  Twp. 28S  Range 4E

Owner  Margaret E. Holliday, Morgan Heights, Carthage, Mo.

Nature of Deposit  Dry  Accessibility  Fair  Site Located on Plate V

Status of Site  Open site; not sampled

EXPLORATION DATA

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CORRELATION DATA

Geological Age  Permian

Geological Source  Fort Riley Limestone Member

Material Similar To

Specific Gravity (Sat.)  (Dry)

Los Angeles Wear

Absorption  Soundness

Wt. Co./ft.  Str. Ratio

Remarks

Scale: 1" = 1/4 Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+29
Qnkt

Site No. Date November, 1968
Chert Gravel County Butler

Location SW\textsuperscript{4} Sec. 12 28S 4E
Two. Range

John P. McComber R. R. 3, Box 78, Augusta, Kansas

Owner

Nature of Deposit Accessorability Status of Site
Dry Good Open site; not sampled

Site Located on Plate

EXPLORATION DATA

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CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)
Chert Gravel Terrace Deposit

Geological Source

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu.Ft. Str. Ratio

Remarks

Scale: 1" = $\frac{1}{4}$ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS-30  
Pfr

Date  November, 1968

Site No.  

Limestone  

County  Butler

Location  NW\(\frac{1}{4}\) NW\(\frac{1}{4}\)  

Sec.  27  

Twp.  28S  

Range  4E

Owner  Edmund Maher  

R. R. 3 Augusta, Kansas

Nature of Deposit  Dry  

Accessibility  Fair  

Site Located on Plate VII

Status of Site  Open site; not sampled

EXPLORATION DATA

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CORRELATION DATA

Geological Age  Permian

Geological Source  Fort Riley Limestone Member

Material Similar To  

Specific Gravity (Sat.)  (Dry)

Los Angeles Wear  

Absorption  Soundness  

Wt. Cu.Ft.  Str. Ratio  

Remarks  

Scale: 1" = \(\frac{1}{4}\) Mile
**STATE HIGHWAY COMMISSION OF KANSAS**

**MATERIAL SURVEY REPORT**

**CG+31 Qnkt**  
Site No.  
Date November, 1968  

Material Chert Gravel  
County Butler  

Location  
NE 1/4 NE 1/4 Sec. 22  
Twp. 28S  
Range 4E  

Owner Edmund Maher  
R. R. 3  
Augusta, Kansas  

Nature of Deposit Dry  
Accessibility Good  
Site Located on Plate VII  

Status of Site Open site; not sampled  

**EXPLORATION DATA**

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**CORRELATION DATA**

Geological Age Quaternary (Nebraskan-Kansan)  
Geological Source Chert Gravel Terrace Deposit  

Material Similar To  

Specific Gravity (Sat.)  
(Dry)  

Los Angeles Dur  

Absorption  
Soundness  

Un. Co.Ft.  
Str. Ratio  

Remarks  

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+32 Pfr
Site No.   Date  November, 1968
Material  Limestone  County  Butler
Location  SE1/4  Sec.  29  Twp.  28S  Range  4E
Owner  Bettie Duvanel, 1620 Highland Dr., Augusta, Kansas
Nature of Deposit  Dry  Accessibility  Good  Site Located on Plate VII
Status of Site  Open site; not sampled

EXPLORATION DATA

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CORRELATION DATA

Geological Age  Permian
Geological Source  Fort Riley Limestone Member
Material Similar To
Specific Gravity (St.) (Dry)
Los Angeles Wear
Absorption  Soundness
Wt. Cu.Ft.  Str. Ratio
Remarks

Scale: 1" = 1/4 Mile
MATERIAL SURVEY REPORT

CG+33
Qalt

Site No. ___________________ Date November, 1968

Chert Gravel County Butler

Material ___________________ Location SW 1/4 SW 1/4 Sec. 12 Twp. 28S Range 7E

Gladys M. Lambing Latham, Kansas

Owner name ___________________ Address ___________________

Nature of Deposit Dry Accessibilty Good Site Located on Plate VI

Status of Site Open site; not sampled

EXPLORATION DATA

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<th>Test Hole</th>
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<th>Depth of Overburden</th>
<th>Percent Retained</th>
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CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Alluvium and Terrace Deposits

Material Similar To ____________________________

Specific Gravity (Sat.) (Dry) ___________________

Los Angeles Wear ____________________________

Absorption ___________________ Soundness ______

Ut. Co.Ft. ___________________ Str. Ratio _____

Remarks ____________________________
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+34
Onkt

Date: November, 1968

Material: Chert Gravel
County: Butler

Location: SW_{1/4} SW_{1/4}
Sec. 24
Twp. 29S
Range 5E

Owner: Lloyd L. White
Caldwell, Kansas

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

Status of Site: Open 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>
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<th>G.F.</th>
<th>L.L.</th>
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CORRELATION DATA

Geological Age: Quaternary (Nebraskan-Kansan)

Geological Source: Chert Gravel Terrace Deposit

Material Similar To: 

Specific Gravity (Sat.): (Dry)

Los Angeles Wear: 

Absorption: Soundness

Mt. Co.Ft.: Str. Ratio

Remarks: 

Scale: 1" = 1/4 Mile
MATERIAL SURVEY REPORT

CG+35
Qnkt

Site No. __________________ Date November, 1968

Chert Gravel County Butler

Material __________ County __________

Location SE 1/4 SE 1/4 Sec. 23 Twp. 29S __ Range 5E

Laura Jane Oil Co., 407 State St., Augusta, Kansas

Owner name __________________ Address __________________

Nature of Deposit __________ Accessibility __________ Site Located on Plate VII

Status of Site __________ Open site; not sampled

EXPLORATION DATA

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</table>

CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Co. ft. Str. Ratio

Remarks

Scale: 1" = 1/4 Mile
MATERIAL SURVEY REPORT

RC+36
Pf

Site No. Date November, 1968

Residual Chert County Butler

Material County Location SE ¼ SE ½ Sec. 15 Twp. 29S Range 6E

Owner Name Leland N. Frakes Address Atlanta, Kansas

Nature of Deposit Accessiblity Site Located on Plate Dry Good VIII

Status of Site Open 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>
<th>Mesh 200</th>
<th>G.F.</th>
<th>L.L.</th>
<th>P.I.</th>
</tr>
</thead>
<tbody>
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</table>

CORRELATION DATA

Geological Age Permian

Geological Source Florence Limestone Member

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Co.Ft. Str. Ratio

Remarks

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

Site No. CG+37  Date November, 1968
Qnkt

Chert Gravel  County  Butler

Location  SW1/4  Sec. 29  Twp. 29S  Range 5E

Owner  Lisle J. Pottorff, R. R. 1, Douglass, Kansas

Nature of Deposit  Dry  Accessibility  Good  Site Located on Plate VII

Status of Site  Open site; not sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age  Quaternary (Nebraskan-Kansan)

Geological Source  Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.)

(Dry)

Los Angeles Wear

Absorption  Soundness

Mt. Ca.Ft.  Str. Ratio

Remarks

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+38

Qnkt

Site No. Date

November, 1968

Chert Gravel County Butler

Material

Location

Sec. 27 Twp. 29S Range 5E

Laura Jane Shawyer, 407 State St., Augusta, Kansas

Owner

Nature of Deposit Accessibility Site Located on Plate

Dry Fair VII

Status of Site

Open 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>B.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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<tbody>
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</table>

CORRELATION DATA

Geological Age

Quaternary (Nebraskan-Kansan)

Geological Source

Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.)

(Dry)

Los Angeles Wear

Absorption

Soundness

Wt. Cu.Ft.

Str. Ratio

Remarks

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

CG+39
Qnlk

Site No.       Date: November, 1968
Material: Chert Gravel          County: Butler
Location: NW 1/4 Sec. 27        Twp. 29S Range 5E
Remarks: See Remarks
Nature of Deposit: Dry          Accessibility: Good
Status of Site: Open 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>
<th>Wash 200</th>
<th>L.L.</th>
<th>P.I.</th>
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<tbody>
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CORRELATION DATA

Geological Age: Quaternary (Nebraskan-Kansan)
Geological Source: Chert Gravel Terrace Deposit
Material Similar To:
Specific Gravity (Sat.): (Dry)
Loss on Ignition:
Absorption:
Soundness:
Wt. Co.Ft.:
Str. Ratio:
Remarks: SW 1/4 NW 1/4 Gary W. Gibson, Douglass, Kansas
         E 1/4 NW 1/4 Laura Jane Oil Co., 407 State St.
         Augusta, Kansas

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

CG+40
Qnkt

Site No. Date November, 1968
Material Chert Gravel County Butler
Location Sec. 21 Twp. 29S Range 4E
Owner Blanche Young Douglass, Kansas
Nature of Deposit Dry Accessibility Poor Site Located on Plate VII
Status of Site Open site; not sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Material 1 1/2</th>
<th>2/3</th>
<th>3/4</th>
<th>4</th>
<th>8</th>
<th>16</th>
<th>30</th>
<th>50</th>
<th>100</th>
<th>Wash 200</th>
<th>G.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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<tbody>
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CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)
Geological Source Chert Gravel Terrace Deposit
Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu.Ft. Str. Ratio

Remarks

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+41
Qnkt

Site No. Date November, 1968

Chert Gravel County Butler

Location Sec. 32 Twp. 29S Range 4E

Julia Taylor et al Douglass, Kansas

Owner

Nature of Deposit Dry Accessibility Good Site Located on Plate VII

Status of Site Open site; not sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Over-Burden</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>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>1/2</th>
<th>3/4</th>
<th>3/8</th>
<th>4</th>
<th>8</th>
<th>16</th>
<th>30</th>
<th>50</th>
<th>100</th>
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</table>

CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu.Ft. Str. Ratio

Remarks Material has been removed from various places in the eastern part of the section.

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

Site No. CG+42
Qnkt. Date November, 1968
Chert Gravel County Butler

Location NW¼ Sec. 33 Twp. 29S Range 4E
Owner

See Remarks
Nature of Deposit Dry
Accessibility Good
Site Located on Plate VII
Status of Site Open site; not sampled

EXPLORATION DATA

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<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Over-Burden</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 (Nebraskan-Kansan)
Geological Source Chert Gravel Terrace Deposit
Material Similar To

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

Remarks E. B. Shawver, 310 Petroleum Bldg., Wichita, Kansas

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+43
Ph
November, 1968

Material: Limestone
County: Butler

Location: SW\(\frac{1}{4}\) NE\(\frac{1}{4}\) Sec. 15 Twp. 29S Range 3E

Owner: name
Address: 

Nature of Deposit: Dry
Accessibility: Poor
Site Located on Plate: VII
Status of Site: Open 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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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1/2 2/3 3/4 3/8 4 8 16 30 50 100</td>
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</table>

CORRELATION DATA

Geological Age: Permian
Geological Source: Herington Limestone Member

Material Similar To:

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

Remarks: O. G. High, & Nellie E. High
4506 Mt. Vernon Rd., Wichita 17, Kansas

Scale: 1" = 1/4 Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+44 Qnkt

Site No. Date November, 1968
Chert Gravel County Butler
Material Location NW\(\frac{1}{4}\) NE\(\frac{3}{4}\) Sec. 36 Twp. 29S Range 3E

Owner See Remarks

Nature of Deposit Dry Accessibility Good Site Located on Plate VII

Status of Site Open 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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G.F. L.L. P.C.

<table>
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<th>Wash 200</th>
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<tr>
<td>1/2</td>
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<td>2/4</td>
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<td>3/8</td>
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CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu.Ft. Str. Ratio

Remarks L. I. Hodges, & Viola Faye Dodson
8924 Maple, Wichita, Kansas

Scale: 1" = \(\frac{1}{4}\) Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+45  Qnkt  

Site No.  Date  November, 1968

Material  Chert Gravel  County  Butler

Location  Sec. 25  Twp. 29S  Range 3E


Nature of Deposit  Dry  Accessibility  Good  Site Located on Plate VII

Status of Site  Open site; not sampled

EXPLORATION DATA

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<th>Test Hole</th>
<th>Material at Time of Hole</th>
<th>Depth of Overburden</th>
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</table>

CORRELATION DATA

Geological Age  Quaternary (Nebraskan-Kansan)

Geological Source  Chert Gravel Terrace Deposit

Material Similar To  

Specific Gravity (Sat.)  (Dry)

Los Angeles Wear  

Soundness  

Mo. Sd.Ft.  Str. Satie  

Remarks  

Scale: 1" = 1/4 Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG-47
Qnkt

Site No. Qnkt Date November, 1968

Material Chert Gravel County Butler

Location

Sec. 6 Twp. 27S Range 7E

Owner

G. V. Henn R. R. 1 Leon, Kansas

Nature of Deposit Dry Accessibility Fair Site Located on Plate VI

Status of Site Open site; not sampled

EXPLORATION DATA

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<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 200</th>
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CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Co. Ft. Str. Ratio

Remarks

Scale: 1" = ¼ Mile
**MATERIAL SURVEY REPORT**

**LS+48**

<table>
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<th>Site No.</th>
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<td>Pfr</td>
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<th>County</th>
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<td>Butler</td>
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<th>Location</th>
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<th>Range</th>
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<th>Owner Name</th>
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<td>W. A. Cundall</td>
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<thead>
<tr>
<th>Nature of Deposit</th>
<th>Accessibility</th>
<th>Site Located on Plate</th>
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<tr>
<td>Dry</td>
<td>Good</td>
<td>VIII</td>
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<thead>
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<th>Status of Site</th>
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**EXPLORATION DATA**

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<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Parts 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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<tr>
<td>1/2</td>
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<td>1/4</td>
<td>3/4</td>
<td>3/8</td>
<td>6%</td>
<td>16%</td>
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**CORRELATION DATA**

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<tr>
<th>Geological Age</th>
<th>Geological Source</th>
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<tr>
<td>Permian</td>
<td>Fort Riley Limestone Member</td>
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<th>Material Similar To</th>
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<tr>
<th>Specific Gravity (Sat.)</th>
<th>(Dry)</th>
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<th>Los Angeles Wear</th>
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<thead>
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<th>Absorption</th>
<th>Soundness</th>
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<th>Wt. Cu.Ft.</th>
<th>Str. Ratio</th>
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<th>Remarks</th>
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Scale: 1" = 1/4 Mile
APPENDIX II

The following site data forms are designated as "open sites; sampled." The sites described herein are depicted on the county materials maps as a " ■ ".

**LEGEND**

- Trail or lane
- Road
- Railroad
- Hedge or trees
- Major streams
- Intermittent streams
- Pond or lake

- Open materials site: sampled
- Center of section
- Farm site
- Cemetery
- School
- Church
- Town or city
Material Survey Report

LS+49

Ph

Site No. Date
Limestone Butler

Material County

Location Sec. 35 Twp. 23S Range 3E

NE 4 SE 4

Charles Stephens Whitewater, Kansas

Owner Name Address

Nature of Deposit Accessibility Site Located on Plate
Dry Good I

Status of Site Open 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 Material</th>
<th>Percent Retained</th>
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</thead>
<tbody>
<tr>
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</table>

Correlation Data

Geological Age
Permian

Geological Source
Herington Limestone Member

Material Similar To Material reported under SHC Lab. No.
61814

Specific Gravity (Sat.) 2.56 (Dry)

Los Angeles Wear 48.2(A)

Absorption 4.17 Soundness 0.93

Mt. Co. Ft. Str. Ratio

Remarks For other test information on this site refer to figure 16 in text.

Scale: 1" = 1/2 Mile
MATERIAL SURVEY REPORT

Site No. Pfr Date November, 1968
Material Limestone County Butler
Location SE 1/4 Sec. 22 Twp. 24S Range 6E
Owner Bernice Wiley et al., 400 S. Denver, El Dorado, Kan.
Nature of Deposit Dry Accessibility Poor Site Located on Plate II
Status of Site Open site; sampled

EXPLORATION DATA

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<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Over-Burden</th>
<th>Percent Retained</th>
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</thead>
<tbody>
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CORRELATION DATA

Geological Age Permian
Geological Source Fort Riley Limestone Member
Material Similar To Material reported under SHC Lab. No. 12506
Specific Gravity (Sat.) 2.43 (Dry) 2.28
Los Angeles Wear 42.7 (B)
Absorption 6.39 Soundness 0.84

Remarks For other test information on this site refer to figure 16 in text.

Scale: 1" = 1/4 Mile
MATERIAL SURVEY REPORT

Site No. Ph
Date November, 1968

Material Limestone
County Butler

Location SE\(\frac{1}{4}\) SE\(\frac{1}{4}\)
Sec. 30
Twp. 24S
Range 4E

Rex C. Graham
Box 66
Peabody, Kansas

Owner's name
Address
Nature of Deposit Dry
Accessibility Good
Site located on Plate I

Status of Site Open site; sampled

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>Percent Retained</th>
<th>Wash</th>
<th>G.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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CORRELATION DATA

Geological Age Permian

Geological Source Herington Limestone Member

Material Similar To Material reported under SHC Lab.

No. 81664

Specific Gravity (Sat.) 2.44 (Dry)

Los Angeles Wear 40.2 (B)

Absorption 4.56

Soundness 0.87

Wt. Cu.Ft. 

Str. Ratio

Remarks
MATERIAL SURVEY REPORT

LS+52
Ph

Site No. Limestone Date November, 1968

Material Butler County

Location SW½ NE¼ Sec. 36 Twp. 24S Range 3E

Owner George M. Myers Box 911 El Dorado, Kansas

Nature of Deposit Dry

Accessibility Good Site located on Plate

Status of Site Open 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 200</th>
<th>G.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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CORRELATION DATA

Geological Age Permian

Geological Source Herington Limestone Member

Material Similar To Material reported under SHC Lab. No. 65-2762

Specific Gravity (Sat.) 2.56 (Dry) 2.43

Los Angeles Wear 47.5 (B)

Absorption 5.01 Soundness 0.89

M. Cu.Ft. Str. Ratio

Remarks For other test information on this site refer to figure 16 in text.

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

LS+53
Ph
Site No. Date November, 1968

Limestone County Butler
Material
Location SW¼ Sec. 6 Twp. 25S Range 4E

Eula Houston Potwin, Kansas
Owner
Nature of Deposit Dry Accessibility Good Site Located on Plate III
Status of Site Open site; sampled

EXPLORATION DATA

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<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
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CORRELATION DATA

Geological Age Permian
Geological Source Herington Limestone Member
Material Similar To Material reported under SHC Lab. No. 24279

Specific Gravity (Sat.) 2.51 (Dry) 2.41
Los Angeles Wear 32.0 (B)
Absorption 5.57 Soundness 0.91

For other test information on this site refer to figure 16 in text.
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+54  Pfr  Date November, 1968

Material Limestone  County Butler

Location NE 1/4 SW 1/4  Sec. 5  Twp. 25S  Range 6E

Owner John B. Cameron  R. R. 4  El Dorado, Kansas

Nature of Deposit  Dry  Accessibility  Good  Site Located on Map  IV

Status of Site  Open site; sampled

EXPLORATION DATA

<table>
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<th>Test Hole</th>
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CORRELATION DATA

Geological Age  Permian

Geological Source  Fort Riley Limestone Member

Material Similar To  Material reported under SHC Lab. No. 89785

Specific Gravity (Sat.)  2.39 (Dry)

Los Angeles Wear  37.6 (B)

Absorption  7.04  Soundness  0.82

Remarks

Scale: 1" = ¼ mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+55  Date November, 1968

Pfr

Material Limestone

County Butler

Location NW¼ NW¼  Sec. 29 25S  Range 6E

Owner Frank T. Kobel  R. R. 4  El Dorado, Kansas

Nature of Deposit Dry  Accessibility Good

Status of Site Open site; sampled

EXPLORATION DATA

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<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
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CORRELATION DATA

Geological Age Permian

Geological Source Fort Riley Limestone Member

Material Similar To Material reported under SHC Lab. No. 29451

Specific Gravity (Sat.) 2.33  (Dry) 2.21

Los Angeles Wear 45.8(B)

Absorption 7.60  Soundness 0.90

Mt. Co.Ft.  Str. Ratio

Remarks For other test information on this site refer to figure 16 in text.

Scale: 1" = ¹/₂ Mile
**MATERIAL SURVEY REPORT**

**Site No.** LS+56  
**Ph**  
**Date** November, 1968

**Material** Limestone  
**County** Butler

**Location** NW_4 NW_4  
**Sec.** 17  
**Twp.** 25S  
**Range** 4E

**Owner** J. Arthur Wilson, 908 N. Washington, Iola, Kansas

**Nature of Deposit** Dry  
**Accessibility** Good  
**Site Located on** Plate III  
**Status of Site** Open site; sampled

**EXPLORATION DATA**

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**CORRELATION DATA**

**Geological Age** Permian  
**Geological Source** Herington Limestone Member  
**Material Similar To** Material reported under SHC Lab. No. 10755

**Specific Gravity (Sat.)** 2.50  
**(Dry)** 2.35

**Los Angeles Wear** 51.2(B)  
**Absorption** 6.41  
**Soundness** 0.71  
**Wt. Cu.Ft.**  
**Str. Ratio**  

**Remarks** For other test information on this site refer to figure 16 in text.

Scale: 1" = ½ Mile
MATERIAL SURVEY REPORT

LS+57  Ph

Site No.           Date    November, 1968

Material:          County:  Butler
Limestone

Location:          Sec. 18
NE 1/4 NE 1/4  Twp. 25S  Range 4E

Owner:             Charles P. Joseph  Potwin, Kansas

Nature of Deposit:  Dry  Accessibility:  Good

Site located on Plate III

Status of Site:    Open site; sampled

EXPLORATION DATA

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

Geological Age:  Permian

Geological Source:  Herington Limestone Member

Material Similar To: Material reported under SHC Lab. No. 20582

Specific Gravity (Sat.)  2.49 (Dry)  2.34

Los Angeles Wear  51.0 (B)

Absorption  6.38  Soundness  0.81

Wt. Co.Ft.  Str. Ratio

Remarks: For other test information on this site refer to figure 16 in text.

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+58
Pfr

Site No.  Date  November, 1968

Limestone  County  Butler

Location  NE 27  Sec. 27  Twp. 25S  Range 5E

Owner  See Remarks

Nature of Deposit  Dry  Accessibility  Poor  Site Located on Plate  III

Status of Site  Open site; sampled

EXPLORATION DATA

<table>
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<th>Test Hole</th>
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CORRELATION DATA

Geological Age  Permian

Geological Source  Fort Riley Limestone Member

Material Similar To  Material reported under SHC Lab. No. 92763

Specific Gravity (Sat.)  2.59 (Dry)

Los Angeles Wear  41.8

Absorption  9.53

Soundness  0.76

Wt. Cu.Ft.  

Str. Ratio  

Remarks  For other test information on this site refer to figure 16 in text.

Minnie W. Augustine etal, & Nell Kunkle, 417 N. Tecumse, El Dorado, Kansas

Scale: 1" = ½ Mile
Material Survey Report

LS+60
Pfr

Date: November, 1968

Site No.

Material: Limestone
County: Butler

Location: NW\(\frac{1}{4}\) NE\(\frac{1}{4}\)
Sec.: 9
Twp.: 26S
Range: 6E

Gladys P. Willhite, 120 S. Pattin, Wichita, Kansas

Nature of Deposit: Dry
Accessibility: Good
Site Located on Plate: IV
Status of Site: Open site; sampled

Exploration Data

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Correlation Data

Geological Age: Permian
Geological Source: Fort Riley Limestone Member
Material Similar To: Material reported under SHC Lab. No. 34012

Specific Gravity (Sat.) 2.45 (Dry) 2.32
Los Angeles Wear 33.9 (B)
Absorption 5.42
Wt. Cu. Ft. Str. Ratio

Remarks: For other test information on this site refer to figure 16 in text.

Scale: 1" = \(\frac{1}{4}\) Mile
MATERIAL SURVEY REPORT

LS+61 Pfr

Site No. Date November, 1968

Limestone County Butler

Location Sec. 5 Twp. 26S Range 6E

Owner Remarks

Nature of Deposit Dry Accessibility Good Site Located on Plate IV

Status of Site Open site; sampled

EXPLORATION DATA

<table>
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<th>Test Note</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Over-Burden</th>
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<th>Wash 200 G.F.</th>
<th>L.L. P.I.</th>
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CORRELATION DATA

Geological Age Permian

Geological Source Fort Riley Limestone Formation

Material Similar To Material reported under SHC Lab. No. 71309

Specific Gravity (Sat.) 2.47 (Dry)

Los Angeles Wear 33.0(A)

Absorption 4.45 Soundness 0.75

Wt. Cu.Ft. Str. Ratio

Remarks For other test information on this site refer to figure 16 in text.

Dolese Brothers, 13 NW 13th St., Oklahoma City, Okla.

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+62 Pfr

Site No.  Date
November, 1968

Limestone

Material  County
Butler

Location  Sec. 6  Twp. 26S  Range 5E

James W. Vestring  Burns, Kansas

Owner  Name

Nature of Deposit  Accessibility
Dry  Fair

Site Located on Plate

Open site; sampled

Status of Site

EXPLORATION DATA

<table>
<thead>
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<th>Test Hole</th>
<th>Material at Section of Hole</th>
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CORRELATION DATA

Geological Age
Permian

Geological Source
Fort Riley Limestone Member

Material Similar To

Material reported under SHC Lab. No. 84436

Specific Gravity (Sat.)
2.28

(Dry)

Los Angeles Wear
47.4 (B)

Absorption
8.66

Soundness 0.73

Wt. Cu.Ft.

Str. Ratio

Remarks

Scale: 1" = 1/4 Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+63

Site No. Pc Date November, 1968

Material Limestone County Butler

Location SW\(\frac{1}{4}\) NE\(\frac{3}{4}\) Sec. 18 Top. 26S Range 4E

Owner See Remarks

Nature of Deposit Dry Accessibility Fair Site Located on Plate III

Status of Site Open site; sampled

EXPLORATION DATA

<table>
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<th>Test Hole</th>
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<th>G.F.</th>
<th>L.L.</th>
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CORRELATION DATA

Geological Age Permian

Geological Source Cresswell Limestone Member

Material Similar To Material reported under SHC Lab. No. 61832

Specific Gravity (Sat.) 2.58 (Dry)

Los Angeles Wear 21.4

Absorption 3.12 Soundness 0.89

Mt. Co.Ft. Str. Ratio

Remarks For other test information on this site refer to figure 16 in text.

Mosier Miles Estate, & Walter McGinnis
210½ W. Central, El Dorado, Kansas

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

\[ \text{LS+64} \]
\[ \text{Pc} \]

Site No. ___________________ Date November, 1968

Material Limestone

County Butler

Location SW\(\frac{1}{4}\) Sec. 17 Twp. 26S Range 4E

Owner Harold Shaffer

Address Towanda, Kansas

Nature of Deposit Dry

Accessibility Good

Site Located on Plate III

Status of Site Open site; sampled

EXPLORATION DATA

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<th>Percent Retained</th>
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CORRELATION DATA

Geological Age Permian

Geological Source Cresswell Limestone Member

Material Similar To Material reported under SHC Lab. No. 18242

Specific Gravity (Sat.) 2.48 (Dry) 2.40

Los Angeles Wear 26.4 (B)

Absorption 3.40

Roundness 0.97

For other test information on this site refer to figure 16 in text.

Scale: 1" = \(\frac{1}{4}\) Mile
MATERIAL SURVEY REPORT

LS+65
Pfr

Site No. Date
Limestone Butler
November, 1968

Material County
Location Sec. Twp. Range
S 1/2 NW 1/2 10 27S 5E

Owner

See Remarks

Nature of Deposit Accessibility Status of Site
Dry Good Open site; sampled

EXPLORATION DATA

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CORRELATION DATA

Geological Age

Geological Source

Material Similar To

Material reported under SHC Lab. No.

86750

Specific Gravity (Sat.) (Dry)

2.44 2.32

Los Angeles Wear

36.7 (B)

Absorption Soundness

5.37 0.81

Wt. Co.Ft.

Str. Ratio

Remarks

For other test information on this site refer to figure 16 in text.

E 1/4 Clara M. Myers, 1631 Sherry Lee Lane, El Dorado, Ks.
W 1/4 Meryl Seglem, R. R. 1, El Dorado, Kansas

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+66
PC

Site No. __________________ Date November, 1968

Material: Limestone County: Butler

Location: NE4 Sec. 4 Twp. 27S Range 4E

Owner: Harry E. Tway R. R. 1 Augusta, Kansas

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

Status of Site: Open site; sampled

EXPLORATION DATA

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CORRELATION DATA

Geological Age: Permian

Geological Source: Cresswell Limestone Member

Material Similar To: Material reported under SHC Lab. No. 90766

Specific Gravity (Sat.): 2.46 (Dry): 2.38

Los Angeles Wear: 29.6(B)

Absorption: 3.60 Soundness: 0.94

Wt. Cu.Ft.: Str. Ratio:

Remarks: For other test information on this site refer to figure 16 in text.

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. LS+67

Date November, 1968

Pc

Material Limestone

County Butler

Location SW ¼

Sec. 5

Twp. 27S

Range 4E

Owner Clyde V. Lassman, R. R. 1 Towanda, Kansas

Nature of Deposit Dry

Accessibility Good

Site located on Plate V

Status of Site Open 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>
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CORRELATION DATA

Geological Age Permian

Geological Source Cresswell Limestone Member

Material Similar To Material reported under SHC Lab. No. 91444

Specific Gravity (Sat.) 2.38

(Dry)

Los Angeles Wear 35.6(B)

Absorption 5.20

Soundness 0.94

Wt. Co.Ft. Str. Ratio

Remarks

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

<table>
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<th>Site No.</th>
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<td>Name</td>
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<td>Nature of Deposit</td>
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EXPLORATION DATA

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Remarks: For other test information on this site refer to figure 16 in text.

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

LS+69
Ph

Site No. ____________________ Date ____________________

Material Limestone

County Butler

Location NE ¼ NE ¼ Sec. 10 27S 3E

Owner William Wolf

R. R. 1 Augusta, Kansas

Nature of Deposit Dry

Accessibility Good Site Located on Plate

Status of Site Open site; sampled

EXPLORATION DATA

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<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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<td>1/2 3/4 3/8 4 6 16 30 50 100</td>
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CORRELATION DATA

Geological Age Permian

Geological Source Herington Limestone Member

Material Similar To Material reported under SHC Lab. No. 67028

Specific Gravity (Sat.) [Blank]

Los Angeles Wear 48.6 (A)

Absorption [Blank]

Soundness [Blank]

Wt. % Ca. % [Blank]

Str. Ratio [Blank]

Remarks [Blank]

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

Site No.  
Qnkt

Date  
November, 1968

Chert Gravel  
Butler

County  

Location

Sec. 29  
Tup. 27S  
Range 6E

Owner

Pearl M. Kennedy  
R. R. 2  
Leon, Kansas

Nature of Deposit

Dry  
Accessibility  
Fair  
Site Located on Plate  
VI

Status of Site

Open 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>
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CORRELATION DATA

Geological Age

Quaternary (Nebraskan-Kansan)

Geological Source

Chert Gravel Terrace Deposit

Material Similar To

Material reported under SHC Lab. No. 81953

Specific Gravity (Sat.)

20.2(A) (Dry)

Los Angeles Wear

Absorption

Soundness 0.94

Ut. Co.Ft.

Str. Ratio

Remarks

For other test information on this site refer to figure 17 in text.
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+71 Pfr

Site No. | Date
-------|------
       | November, 1968

Material: Limestone

County: Butler

Location: NE 1/4 NE 1/4 Sec. 35 Twp. 27S Range 6E

Owner: Alfred G. Trimpa 9901 Par Lane Wichita, Kansas

Nature of Deposit: Dry

Accessibility: Good

Site Located on Plate: VI

Status of Site: Open 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>Wash</th>
<th>G.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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CORRELATION DATA

Geological Age: Permian

Geological Source: Fort Riley Limestone Member

Material Similar To: Material reported under SHC Lab. No. 61823

Specific Gravity (Sat.) 2.32 (Dry)

Los Angeles Wear 46.6(A)

Absorption 7.95 Soundness 0.91

Wt. C.F. Str. Ratio

Remarks: For other test information on this site refer to figure 16 in text.

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

Site No. CG+72  
Onkt  

Date November, 1968  

Material Chert Gravel  
County Butler  

Location SE\text{\textdegree}  
Sec. 30  
Twp. 27S  
Range 6E  

Owner James R. Pettit  
Box 34  
Leon, Kansas  

Accessibility Good  

Nature of Deposit Dry  

Site Located on Plate VI  

Status of Site Open site; sampled  

EXPLORATION DATA

<table>
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<th>Test</th>
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<th>Depth of Overburden</th>
<th>Percent Retained</th>
<th>G.F.</th>
<th>L.L.</th>
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CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)  

Geological Source Chert Gravel Terrace Deposit  

Material Similar To Material reported on SHC form 619 No. 8-18  
Lab. No. 81955  

Specific Gravity (Sat.)  
(Dry)  

Los Angeles Wear 19.2(A)  

AbsorptionSoundness 0.98  

Mt. Co.Ft. Str. Ratio  

Remarks For other test information on this site refer to figure 17 in text.
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS-73
Pfr

Date November, 1968

Material Limestone
County Butler

Location NW1/4 SW1/4 Sec. 30 Twp. 27S Range 6E

Owner C. N. VanDever R. R. 2 Leon, Kansas

Nature of Deposit Dry Accessibility Good Site located on Plate VI

Status of Site Open site; 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>1/2</th>
<th>3/4</th>
<th>3/8</th>
<th>4</th>
<th>8</th>
<th>16</th>
<th>30</th>
<th>50</th>
<th>100</th>
<th>Wash</th>
<th>G.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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CORRELATION DATA

Geological Age Permian
Geological Source Fort Riley Limestone Member
Material Similar To Material reported under SHC Lab. No. 81958

Specific Gravity (Sat.) 2.41

Los Angeles Wear 35.2 (B)

Absorption 5.78

Soundness 0.95

Wt. Cu.Ft. Str. Ratio

Remarks For other test information on this site refer to figure 16 in text.

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+74
Pfr

Site No. __________________ Date ________________

November, 1968

Material ___________ County ___________
Limestone Butler

Location NE1/4 Sec. 34 Twp. 27S Range 4E

See Remarks

Owner Name ____________________________ Address ____________________________

Nature of Deposit Dry Accessibility Fair Site Located on Plate V

Status of Site Open site; sampled

EXPLORATION DATA

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<th>Percent Retained</th>
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<td>1/2 3/4 2/6 4 8 16 30 50 100</td>
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|                       |                           |                     |                     | Wash 200 |
|                       |                           |                     |                     |          |
|                       |                           |                     |                     | G.F.     |
|                       |                           |                     |                     | L.L.     |
|                       |                           |                     |                     | P.L.     |

CORRELATION DATA

Geological Age Permian

Geological Source Fort Riley Limestone Member

Material Similar To Material reported under SHC Lab. No. 62074

Specific Gravity (Sat.) 2.26 (Dry)

Los Angeles Wear 47.6(A)

Absorption 9.91 Soundness 0.94

Wt. Cu. Ft. Str. Ratio

Remarks For other test information on this site refer to figure 16 in text.

Ralph L. Smith, & J. A. Smith
R. D. 3, Augusta, Kansas

Scale: 1" = ½ Mile
# Material Survey Report

**LS+75**

**Pfr**

**Material:** Limestone  
**County:** Butler  

**Location:** NW¼ NW¼  
**Sec.:** 35  
**Twp.:** 27S  
**Range:** 4E  

**Owner:** Dorothy Hoopes, 1920 Meadowlake Dr., Augusta, Kansas  
**Nature of Deposit:** Dry  
**Accessibility:** Fair  
**Status of Site:** Open 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 200</th>
<th>G.F.</th>
<th>L.T.</th>
<th>P.I.</th>
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</table>

## Correlation Data

**Geological Age:** Permian  
**Geological Source:** Fort Riley Limestone Member  
**Material Similar To:** Material reported under SHC Lab. No. 81962  

**Specific Gravity (Sat.)** 2.25  
**Los Angeles Wear** 48.2(B)  
**Absorption** 11.11  
**Soundness** 0.89  

**Remarks:** For other test information on this site refer to figure 16 in text.
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+76   Pc
Site No.   Date November, 1968
Limestone   County Butler
Material   Location SE¼ NW¼   Sec. 12   Twp. 28S   Range 3E
Ralph O. Ralston   R. R. 5 Wichita, Kansas
Owner   Nature of Deposit Dry   Accessibility Fair
Status of Site Open 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>
</tr>
</thead>
</table>

| Depth of Overburden | 1/2 | 3/4 | 2/8 | 4    | 8    | 16   | 30   | 50   | 100  |

CORRELATION DATA

Geological Age Permian
Geological Source Cresswell Limestone Member
Material Similar To Material reported under SHC Lab. No. 10344

Specific Gravity (Sat.) 2.49 (Dry) 2.40
Los Angeles Wear 31.2 (B)
Absorption 3.72
Soundness 0.89

Remarks For other test information on this site refer to figure 16 in text.

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+77
Qalt

Chert Gravel

Butler

Site No. __________ Date __________

Location

Material

County

Owner

Address

Nature of Deposit

Accessibility

Site Located on Plate

Status of Site

EXPLORATION DATA

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

Geological Age

Quaternary

Geological Source

Alluvium and Terrace Deposits

Material Similar To

Material reported under SHC Lab. No.

66-3518

Specific Gravity

Dry 2.45

Los Angeles Wear

17.9(B)

Absorption

3.18

Soundness

0.99

Volume Cu.Ft.

Str. Ratio

Remarks

For other test information on this site refer to figure 17 in text.

Scale: 1" = ¼ Mile
**MATERIAL SURVEY REPORT**

**CG+78**  
*Qnkt*

**Site No.**  
**Date**  
**November, 1968**

**Material**  
**County**  
**Chert Gravel**  
**Butler**

**Location**  
**Sec.** 27  
**Twp.** 28S  
**Range** 4E  
**NE1/4 NW1/4**

**Owner**  
**Name**  R. R. 3  
**Address**  Augusta, Kansas  
**Ed Maher**

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

**Status of Site**  
**Open site; sampled**

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Material at Bottom of Hole</th>
<th>Depth of Overburden</th>
<th>Percent Retained</th>
<th>Wash 200</th>
<th>C.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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<tr>
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<td>1/1</td>
<td>2/4</td>
<td>3/8</td>
<td>4</td>
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**EXPLORATION DATA**

**CORRELATION DATA**

**Geological Age**  
*Quaternary (Nebraskan-Kansan)*

**Geological Source**  
*Chert Gravel Terrace Deposit*

**Material Similar To**  
*Material reported under SHC Lab. No. 86751*

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

**Los Angeles Wear**  
22.7(C)

**Absorption**  
**Soundness**  0.98

**Mt. Cft.**  
**Str. Ratio**

**Remarks**  
For other test information on this site refer to figure 17 in text.

---

**Scale:** 1" = ½ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

CG+79
Onkt

Site No. Date November, 1968
Chert Gravel County Butler
Material Location
Sec. 28 Twp. 29S Range 4E
Owner Name
Waldo Jones R. R. 2 Douglass, Kansas
Owner Address
Nature of Deposit Accessibility Site Located on Plate
Dry Good VII
Status of Site Open 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>
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<td>1/2 3/4 3/8 4 8 16 30 50 100 Wash 200 G.F. L.L. P.I.</td>
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CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)
Geological Source Chert Gravel Terrace Deposit
Material Similar To Material reported under SHC Lab. No. 82078

- Specific Gravity (Sat.) 2.39 (Dry)
- Los Angeles Wear 19.2(A)
- Absorption Soundness 0.99
- Mt. Co.Ft. Str. Ratio

Remarks For other test information on this site refer to figure 17 in text.

Scale: 1" = 1/4 Mile
MATERIAL SURVEY REPORT

LS+80  
Pc

Date: November, 1968

Limestone  
County: Butler

Location: W½ E½  
Sec. 19  
Twp. 29S  
Range 4E

Owner: Marshall E. Carr  
Box 117  
Neodesha, Kansas

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

Status of Site: Open 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 200</th>
<th>C.F.</th>
<th>L.L.</th>
<th>P.I.</th>
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CORRELATION DATA

Geological Age: Permian

Geological Source: Cresswell Limestone Member

Material Similar To: Material reported under SHC Lab. No. 68196

Specific Gravity (Sat.) 2.43 (Dry) 2.30

Los Angeles Wear 31.5 (B)

Absorption 5.61  Soundness 0.77

Wt. Cu.Ft.  
Str. Ratio

Remarks: For information on other test data of this site refer to figure 16 in text.

Scale: 1" = ¼ Mile
**MATERIAL SURVEY REPORT**

**LS-81**

**PC**

**Site No.**

**Date** November, 1968

**Material** Limestone

**County** Butler

**Location** SW \( \frac{1}{4} \) SE \( \frac{1}{4} \)

Sec. 18  Twp. 29S  Range 4E

**Owner** See Remarks

**See Remarks**

**Nature of Deposit** Dry

**Accessibility** Good

**Site Located on Plate** VII

**Status of Site** Open site; sampled

### EXPLORATION DATA

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

**Geological Age** Permian

**Geological Source** Cresswell Limestone Member

**Material Similar To** Material reported under SHC Lab. No. 78809

**Specific Gravity (Sat.)** 2.54  (dry)

**Los Angeles Wear** 25.6(A)

**Absorption** 3.03  Soundness 0.96

**M. Cu.Ft.**

**Str. Ratio**

**Remarks** For other test information on this site refer to figure 16 in text.

Josephine A. Stabler, 3944 N. Athenian

Wichita 4, Kansas

Scale: 1" = \( \frac{1}{4} \) Mile
MATERIAL SURVEY REPORT

LS+82

Pc

Date: November, 1968

Material: Limestone
County: Butler

Location: NW 1/4 NE 1/4
Sec. 30
Twp. 29S
Range 4E

Owner: George G. Gibson
Douglass, Kansas

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

Status of Site: Open 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>
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<td>Wash 200</td>
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CORRELATION DATA

Geological Age: Permian

Geological Source: Cresswell Limestone Member

Material Similar To: Material reported under SHC Lab. No. 38232

Specific Gravity (Sat.) 2.45
(Dry) 2.37

Los Angeles Wear

Absorption 3.61
Soundness

Wt. Cu.Ft. Str. Ratio

Remarks: For other test information on this site refer to figure 16 in text.

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+83
Pfr

Site No. Limestone
Date November, 1968
County Butler
Location NE 1/4 Sec. 9 Two. 28S Range 4E
Owner See Remarks
Nature of Deposit Dry
Accessibility Good
Site Located on Plate V
Status of Site Open site; sampled

EXTRACTION DATA

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<th>Percent Retained</th>
<th>Wash 200</th>
<th>G.F.</th>
<th>L.L.</th>
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CORRELATION DATA

Geological Age Permian
Geological Source Fort Riley Limestone Member
Material Similar To Material reported under SHC Lab. No. 67-529
Specific Gravity (Sat.) 2.29 (Dry) 2.09
Los Angeles Wear 52.5(B)
Absorption 9.72 Soundness 0.88
Wt. Cu.Ft. Str. Ratio
Remarks For other test information on this site refer to figure 16 in text.
William E. Weidensaul, 2044 S. Terrace Dr.
Wichita, Kansas

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+84
Ph

Date November, 1968

Material Limestone
County Butler

Location SE¼ SW¼ Sec. 18 Twp. 23S Range 4E

Owner Johanna Schmidt, 413 Bleckley, Wichita, Kansas

Nature of Deposit Dry
Accessibility Good
Site Located on Plate I

Status of Site Open site; sampled

EXPLOSION DATA

<table>
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<th>Depth of Material Below Over-Burden</th>
<th>Depth 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 Permian

Geological Source Herington Limestone Member

Material Similar To Material reported under SHC Lab. No. 8999

Specific Gravity (Sat.) 2.53 (Dry) 2.39

Los Angeles Wear 63.8(B)

Absorption 5.77 Soundness 0.73

Wt. Cu.Ft. Str. Ratio

Remarks For other test information on this site refer figure 16 in text.

Scale: 1" = ¼ Mile
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+85

Site No.  
Pc  
Date  November, 1968  

Material  Limestone  
County  Butler  

Location  SW1/4 SW1/4  
Sec.  17  
Twp.  23S  
Range  4E  

Owner  Frank Lathrop  
Burns, Kansas  

Nature of Deposit  Dry  
Accessibility  Good  
Site Located on Plate  I  

Status of Site  Open 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>
<th>Depth of Material</th>
<th>Percent Retained</th>
<th>Wash 200</th>
<th>G.F.</th>
<th>L.I.</th>
<th>P.I.</th>
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</table>

CORRELATION DATA

Geological Age  Permian  
Geological Source  Crosswell Limestone Member  
Material Similar To  Material reported under SHC Lab. No. 97998  
Specific Gravity (Sat.)  2.14  
(Dry)  1.93  
Los Angeles Wear  43.3(B)  
Absorption  10.84  
Soundness  0.97  

Remarks  For other test information on this site refer to figure 16 in text.
STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

LS+86
Pfr

Site No.          Date         November, 1968

Limestone        County       Butler

Location  NW\(\frac{1}{4}\)  Sec.  6  Twp.  23S  Range  8E

Nature of Deposit Dry  Accessibility Poor  Site Located on Plate II

Status of Site  Open site; sampled

EXPLORATION DATA

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<th>Depth of Overburden</th>
<th>Percent Retained</th>
<th>Depth of Material</th>
<th>Wash 1/2</th>
<th>Wash 3/4</th>
<th>Wash 3/8</th>
<th>Wash 16</th>
<th>Wash 30</th>
<th>Wash 50</th>
<th>Wash 100</th>
<th>G.F.</th>
<th>L.I.</th>
<th>P.I.</th>
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</table>

CORRELATION DATA

Geological Age  Permian

Geological Source  Fort Riley Limestone Member

Material Similar To  Material reported under SHC Lab. No. 92512

Specific Gravity (Sat.)  2.34  (Dry)

Los Angeles Wear  43.6(B)

Absorption  8.16  Soundness  0.80

Mt. Co.Ft. Str. Ratio

Remarks  For other test information on this site refer to figure 16 in text.

J. S. Bridwell, Box 1830, 1020 1st Nat. Bank Bldg. Wichita Falls, Texas

Approximate center of correction section

Scale: 1" = ¼ Mile
APPENDIX III

The following site data forms are designated as "prospective sites; sampled." The sites described herein are depicted on the county materials maps as a "▼".

LEGEND

--- Trail or lane
--- Road
++++ Railroad
---- Hedge or trees
--- Major streams
--- Intermittent streams
--- Pond or lake

▼ Prospective materials site; sampled
○ Center of section
□ Farm site
✚ Cemetery
⊲ School
✚ Church
■ Town or city
# MATERIAL SURVEY REPORT

**LS+87**

**Site No.**

**Pc**

**Date**

November, 1968

**Material**

Limestone

**County**

Butler

**Location**

NE\(\frac{1}{4}\)

**Sec.**

16

**Twp.**

25S

**Range**

4E

**Owner**

C. M. Longstreth

**Town,** Kansas

**Nature of Deposit**

Dry

**Accessibility**

Good

**Site Located on Plate**

III

**Status of Site**

Prospective 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 200</th>
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## CORRELATION DATA

**Geological Age**

Permian

**Geological Source**

Cresswell Limestone Member

**Material Similar To**

Material reported under SHC Lab. No. 81663

**Specific Gravity (Sat.)**

2.33

**Specific Gravity (Dry)**

(Dry)

**Los Angeles Wear**

39.0

**Absorption**

Soundness 0.93

**Wt. Cu.Ft.**

Str. Ratio

**Remarks**

---

Scale: 1" = \(\frac{1}{2}\) Mile
**MATERIAL SURVEY REPORT**

**LS+88**

---

**Site No.:**

---

**Material:** Limestone

---

**Location:** NE

---

**Date:** November, 1968

---

**County:** Butler

---

**Sec.:** 17

---

**Township:** 25S

---

**Range:** 6E

---

**Owner:** Joseph E. Lewellen

---

**Name:** R. R. 4

---

**Address:** El Dorado, Kansas

---

**Nature of Deposit:** Dry

---

**Accessibility:** Good

---

**Site Located on Plate:** IV

---

**Status of Site:** Prospective site; sampled

---

### EXPLORATION DATA

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<th>Depth of Overburden</th>
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</table>

### CORRELATION DATA

**Geological Age:** Permian

---

**Geological Source:** Fort Riley Limestone Member

---

**Material Similar To:** Material reported under SHC Lab. No. 61910

---

**Specific Gravity (Sat.)** 2.36 (Dry)

---

**Los Angeles Wear** 43.5(A)

---

**Absorption** 6.55

---

**Soundness** 0.84

---

**Mt. Co.Ft.**

---

**Str. Ratio**

---

**Remarks:** For other test information on this site refer to figure.

---

**Scale:** 1" = ¼ Mile
APPENDIX IV

The following site data forms are designated as "prospective sites; not sampled." The sites described herein are depicted on the county materials maps as a "●".

LEGEND

Trail or lane
Road
Railroad
Hedge or trees
Major streams
Intermittent streams
Pond or lake
Prospective materials site; not sampled
Center of section
Farm site
Cemetery
School
Church
Town or city
CG+89
Qnkt

Site No. ________ Date ________

Material Chert Gravel County Butler

Location NW ¼ NW ¼ Sec. 25 Twp. 29S Range 5E

Owner Robert J. Little Douglass, Kansas

Nature of Deposit Dry Accessibility Good Site Located on Plate VII

Status of Site Prospective site; not sampled

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</table>

CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.)

Los Angeles Wear

Absorption Soundness

Wt. Cu.Ft.

Str. Ratio

Remarks

Scale: 1" = ¼ Mile
MATERIAL SURVEY REPORT

CG+90
Onkt

Date: November, 1968

Material: Chert Gravel
County: Butler

Location: SW 1/4 SE 1/4
Sec.: 29
Twp.: 29S
Range: 5E

See Remarks

Nature of Deposit: Dry
Accessibility: Fair
Site Located on Plate VII

Status of Site: Prospective site; not sampled

EXPLORATION DATA

Test hole | Material at bottom of hole | Depth of overburden | Depth of material | Percent Retained | Wash | G.F. | L.L. | P.I.
--- | --- | --- | --- | --- | --- | --- | --- | ---

CORRELATION DATA

Geological Age: Quaternary (Nebraskan-Kansan)

Geological Source: Chert Gravel Terrace Deposit

Material Similar To:

Specific Gravity (Sat.) (Dry):

Los Angeles Wear:

Absorption:

Soundness:

Mt. Co.Ft.:

Str. Ratio:

Remarks: W. L. Zink, % Jean Faulkender

4500 Thompson, Oklahoma City, Oklahoma

Scale: 1" = 1/4 Mile
MATERIAL SURVEY REPORT

CG+91
Qnkt

Date November, 1968

Material Chert Gravel

County Butler

Location SE1/4 Sec. 33 Twp. 27S Range 5E

Grace Lietzke, 144 Broadway, Augusta, Kansas

Owner name

Accessibility Fair

Site Located on Plate V

Status of Site Prospective site; not sampled

EXPLORATION DATA

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Depth at Bottom of Hole</th>
<th>Depth of Overburden</th>
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<td></td>
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<td>1 1/2 3/4 3/8 4 8 16 30 50 100 Wash 200 G.F. L.L. P.I.</td>
</tr>
</tbody>
</table>

CORRELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)

Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.) (Dry)

Los Angeles Wear

Absorption Soundness

Wt. Cu. Ft. Str. Ratio

Remarks

Scale: 1" = 1/4 Mile
MATERIAL SURVEY REPORT

CG+92
Onkt

Date November, 1968

Material Chert Gravel
County Butler

Location Sec. 20
Twp. 27S
Range 6E

Owner See Remarks

Nature of Deposit
- Dry
- Accessibility
- Site Located on Plate
- Good

Status of Site Prospective site; not sampled

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CORELATION DATA

Geological Age Quaternary (Nebraskan-Kansan)
Geological Source Chert Gravel Terrace Deposit

Material Similar To

Specific Gravity (Sat.)(Dry)
Los Angeles Wear
Absorption
Soundness

Mt. Co.Ft. Str. Ratio

Remarks

SE:\ Mable A. Henry, R. R. 2, Box 5, Leon, Kansas
SW:\ Claude K. Gilliland, Leon, Kansas

Scale: 1" = ¼ Mile
GLOSSARY OF SIGNIFICANT TERMS


Absorption: Determined by tests performed in accordance with A.A.S.H.O. designation T 85.

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

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

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

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

Degrade: Lowering of the surface of the land by erosive processes, especially by the removal of material through erosion and transportation by flowing water.

Geologic period: A unit of geologic time, Mississippian, Pennsylvanian, and Permian are examples.

Geologic unit: This term is used in this report to denote: 1. a geologic formation, 2. a geologic member, and 3. an unconsolidated deposit of Pleistocene age.

Gradation factor: The value obtained by adding the percentages of material retained on the 1/4", 3/4", 4, 8, 16, 30, 50, and 100 sieves respectively and dividing the sum by 100.

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

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


Material source bed: A particular geologic unit, consolidated or unconsolidated, that provides material for construction purposes.
Metamorphic rock: Rock which has been crystallized or otherwise altered by intense heat and pressure.

Open materials site: A pit or quarry which has produced or is producing material suitable for some phase of road construction.


Pleistocene Series: Deposits laid down during the Quaternary Period.

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

Sink: Sunken area which appears on the ground surface which has resulted from solution and collapse in carbonate rock.


Specific gravity: Determined by tests performed in accordance with A.A.S.H.O. designation T 84 for sand and gravel and T 85 for crushed stone.

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

Unconsolidated deposits: Deposits of clay, silt, sand, or gravel. These deposits may be laid down by wind or water action.

Wash (Material passing the No. 200 sieve) Determined by tests performed in accordance with A.A.S.H.O. designation T 11.

Weight per cubic foot: Determined by tests performed in accordance with A.A.S.H.O. designation T 19-45.
SELECTED REFERENCES


