

OPEN MATERIALS SITES; SAMPLED

LEGEND

	Trail or lane		Open materials sites; sampled
	Road		Open materials sites; not sampled
	Railroad		Prospective materials sites; sampled
	Hedge or trees		Center of section
	Major streams		Dwelling
	Intermittent streams		Cemetery
	Pond or lake		School
			Church
			Town or city

MATERIAL SITE DATA FORM

Site No. LS+1 Date Nov. 3, 1974
PS
 Material Limestone County Miami
 Location NW 1/4 Sec. 35 Twp. 15S Range 21E
 Owner Ivan Wallace Wiseman, Rt. 1, Wellsville, Ks. 66092
 Name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Sampled

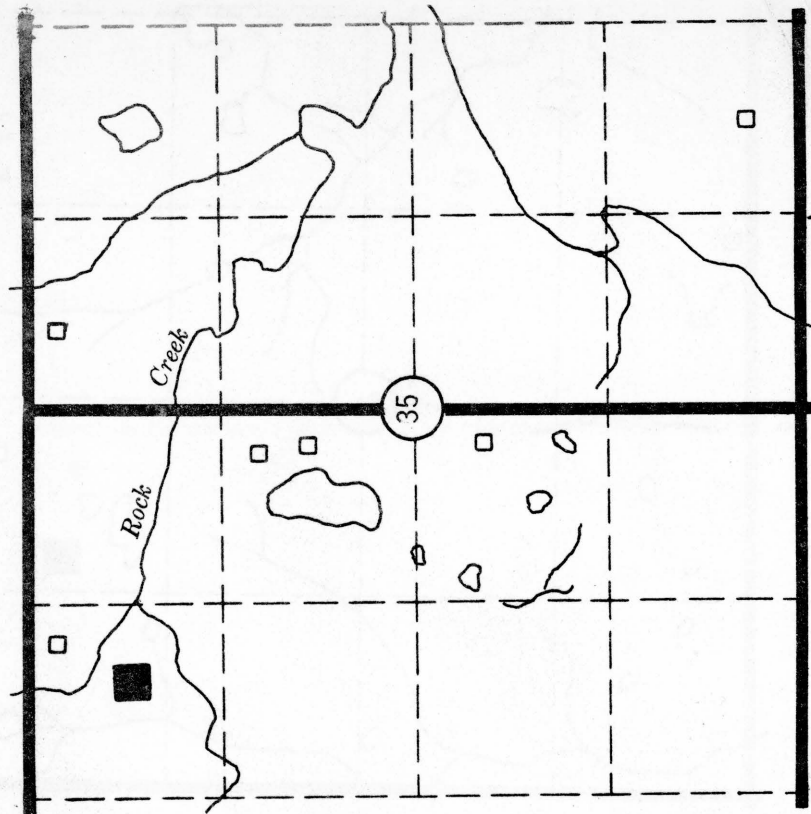
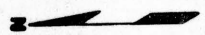
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Pennsylvanian
 Geological Source Stanton Limestone Formation - Stoner Member
 Material Similar To SHC form 619, No. 61-19

Specific Gravity (Sat.) 2.59 (Dry) 2.52
 Los Angeles Wear 28.2
 Absorption 2.62 Soundness 0.97
 Wt. Cu.ft. Str. Ratio
 Remarks



Scale: 1" = 1/4 mile

$$Ls+2$$

Ep Site No. _____ Date Nov., 1974
 Limestone Material _____ County Miami
 SW $\frac{1}{4}$ _____ Sec. 27 _____ Twp. 16 S _____ Range 22 E
 Location _____
 Owner _____ name _____ address _____
 Dry _____ Good _____
 Mature or Deposit _____ Accessibility _____ Site Located on Plate I
 Open Materials Site; Sampled
 Status of Site _____

[illegible]

 Geological Age _____

 Geological Source _____

 Material Similar To _____

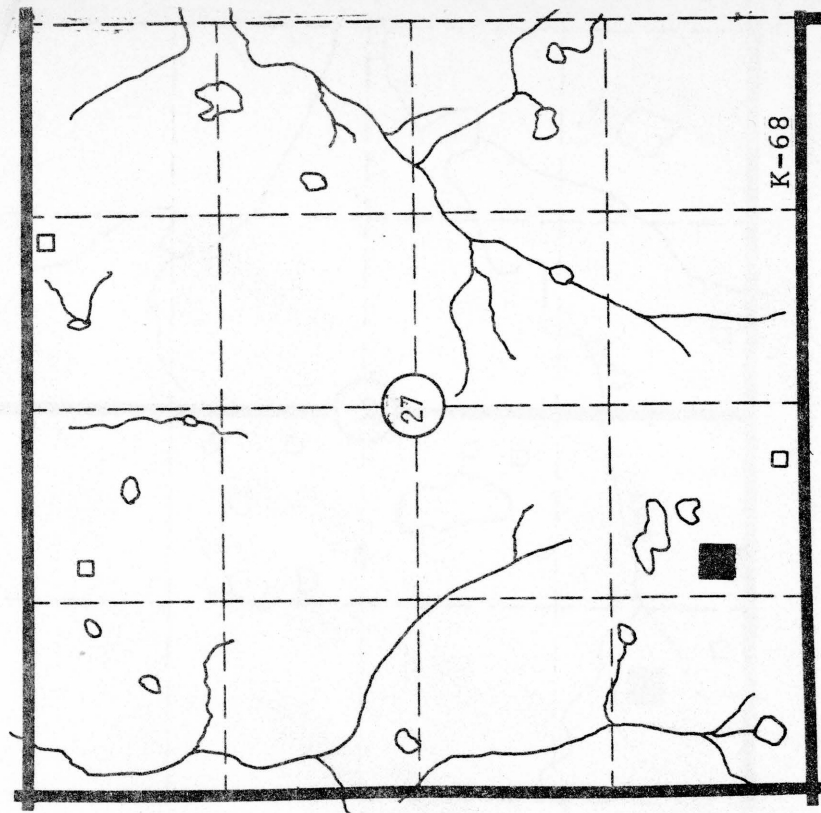
2.52	2.41
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SPECIFIC GRAVITY (S.G.) 40.0

Absorption	4.3	Soundness	0.90
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Wt. Cu. Ft. _____ Str. Ratio - _____

Remarks



scale: 1" = $\frac{1}{4}$ mile

MATERIAL SITE DATA FORM

Site No. LS+3 Date Nov., 1974
FW Material Limestone County Miami
 Location SW 1/4 Sec. 7 Twp. 16S Range 25E
 Owner Kurz, Carl W. Jr. & wife, 10312 Lee Blvd., Leawood, Ks.
 Name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate II
 Status of Site Open Materials Site; Sampled

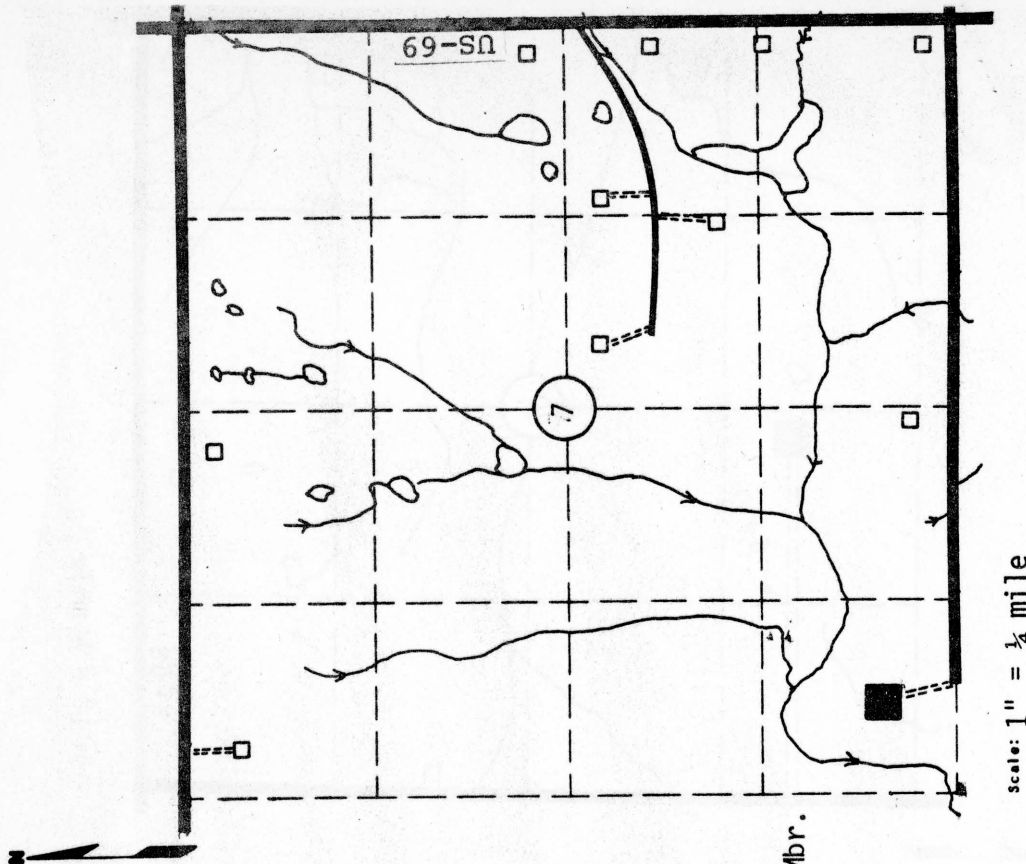
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Pennsylvanian
 Geological Source Wyandotte Limestone Formation-Argentine Ls. Mbr.
 Material Similar To SHC Form 619, No. 61-23

Specific Gravity (sat.) 2.49 (dry) 2.40
33.7
 Los Angeles Wear 3.83 Soundness 0.98
 Absorption
 Wt. Cu.ft. Str. Ratio
 Remarks



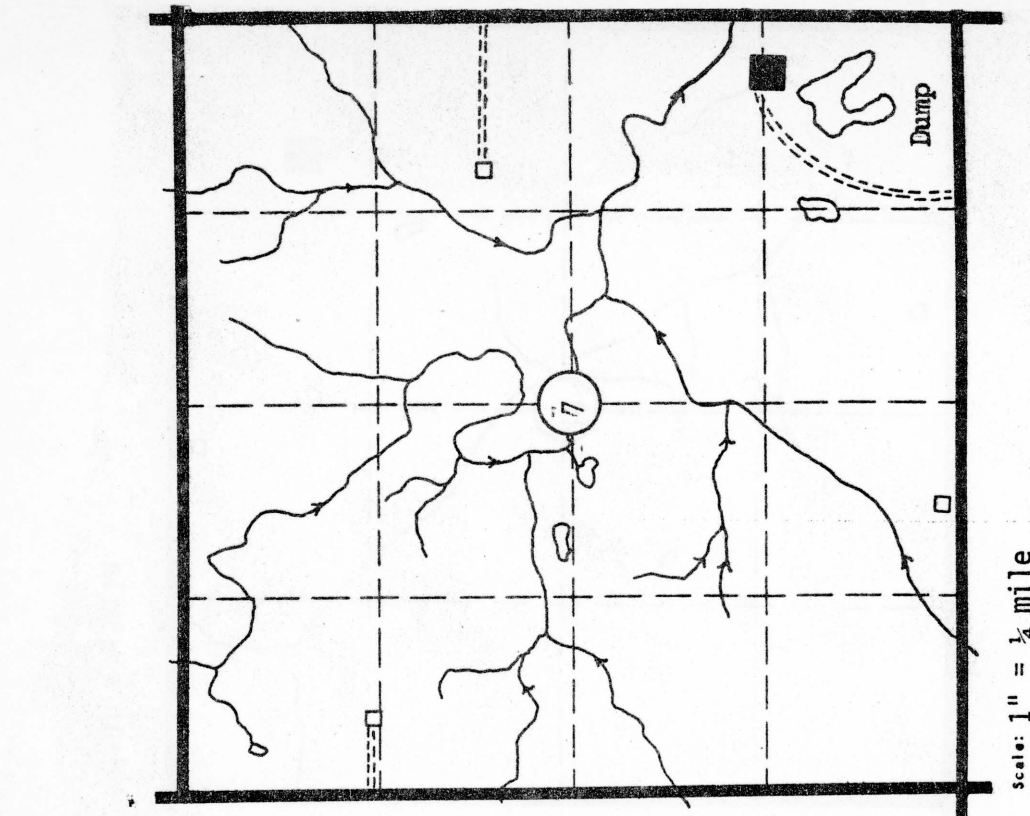
Scale: 1" = 1/4 mile

Ls+5
 Site No. 71 Date Nov., 1974
 Material Limestone County Miami
 Location SE 1/4 Sec. 7 Twp. 17S Range 23E
 Owner Lester W. Hayes, & Wife, Rt. 1, Paola, Kansas address _____
 name _____
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Sampled

[illegible]

Geological Age Pennsylvanian
Geological Source Iola Limestone Formation-Raytown Ls. Mbr.
Material Similar To SHC Form 619, No. 61-18

Specific Gravity (Sat.)	2.60	(Dry)	2.55
Los Angeles Wear	29.8		
Absorption	2.12	Soundness	0.95
wt. Cu.ft.		Str. Ratio	
Remarks			



Scale: $1'' = \frac{1}{4}$ mile

Ls+6

Site No. PI Date Nov., 1974
 Material Limestone County Miami
 Location SE $\frac{1}{4}$ Sec. 18 Twp. 17S Range 23E
 Owner R. H. Ashwell, Rt. 3, Paola, Kansas address _____
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Sampled

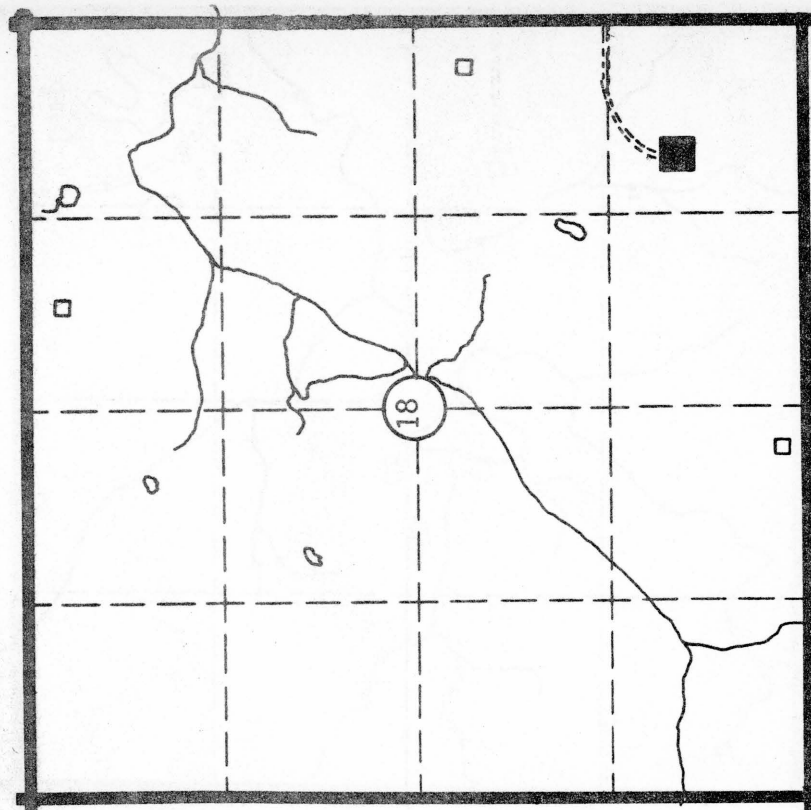
EXPLORATION DATA

[illegible]

CORRELATION DATA

Pennsylvania
 Iola Limestone Formation-Raytown Ls. Mbr.
 Geological Source
 Material Similar To
 SHC Form 619, No. 61-25

Specific Gravity (Sat.)	2.61	(Dry)	2.54
Los Angeles Wear	31.0		
Absorption	1.6	Soundness	0.95
Wt. Cu.Ft.		Str. Ratio	
Remarks			



Scale: 1" = $\frac{1}{4}$ mile

MATERIAL SITE DATA FORM

$$\underline{Ls+7}$$

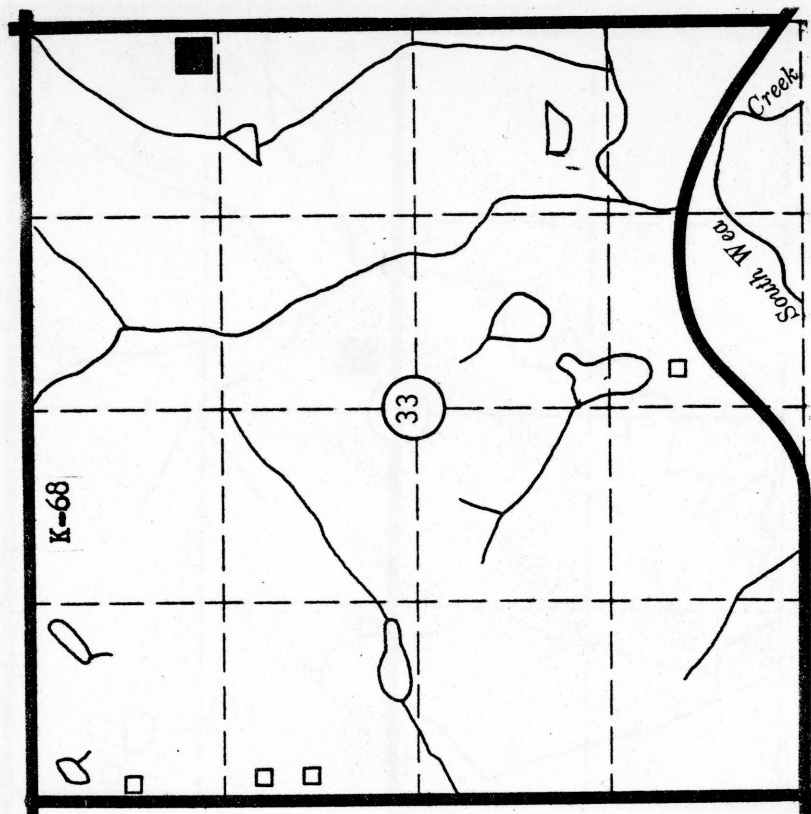
Site No. FW Date Nov., 1974
Material Limestone County Miami
Location NE 1/4 Sec. 33 Twp. 16S Range 24E
Owner L. J. Cattle Co. Inc., % Jerold Johnson, Rt. 3, Olathe, K
name address IV6061
Nature of Deposit Dry Accessibility Good Site Located on Plate _____
Status of Site Open Materials Site; Sampled

EXPLORATION DATA

[illegible]

CORRELATION DATA

Geological Age	Pennsylvanian		
Geological Source	Wyandotte Ls. Formation		
Material Similar To	SHC Form 619, No. 61-28		
Specific Gravity (Sat.)	2.58	(Dry)	2.51
Los Angeles Wear	30.7		
Absorption	2.48	Soundness	0.97
Wt. Cu.Ft.	Str. Ratio		
Remarks			



Scale: $1'' = \frac{1}{4}$ mile

$$\underline{Ls+8}$$

Site No. Pi Date Nov., 1974
 Material Limestone County Miami
 Location SE 1/4 Sec. 20 Twp. 18S Range 22E
 Owner J.T. Terry & Wife, % S.W. McAllister, 821 Brown, Osawatomie
 Name Dry Accessibility Good Site Located on Plate V
 Nature of Deposit Open Materials Site; Sampled
 Status of Site Open

EXPLORATION DATA

[illegible]

CORRELATION DATA

Geological Age Pennsylvanian
Geological Source Iola Limestone Formation-Raytown Limestone Mbr.
Material Similar To SHC Form 619, No. 61-29

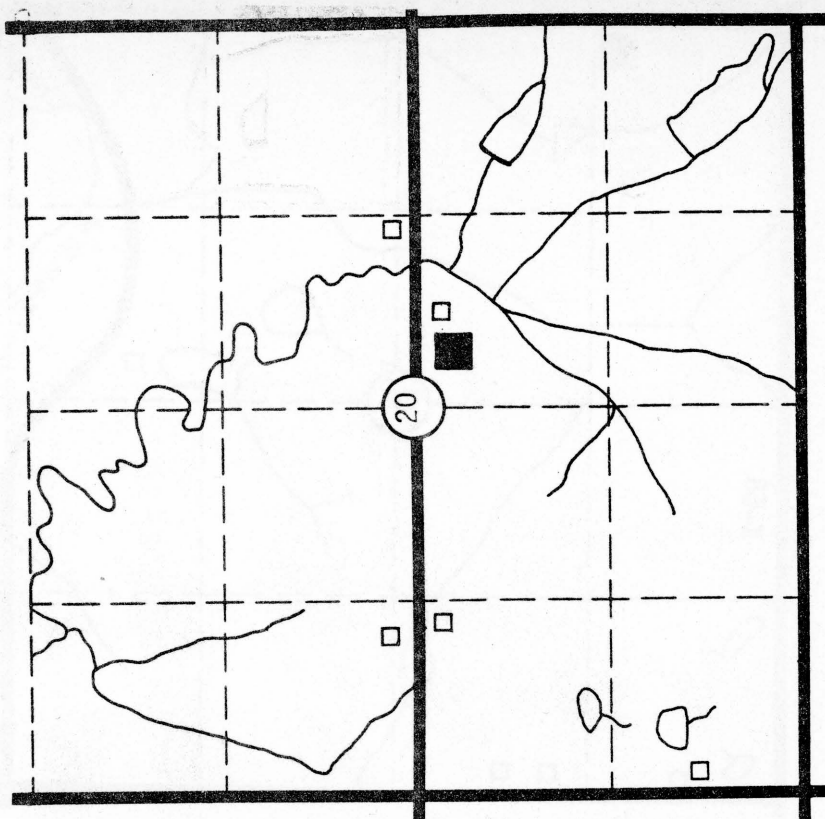
$$\frac{2.61 - 2.62}{2.55 - 2.59} \text{ (Dry)}$$

30B

Los Angeles wear	2.4 - 1.5	0.97
Abstraction		Soundness

Wt. Cu.Ft. _____ Str. Ratio - _____

Remarks -



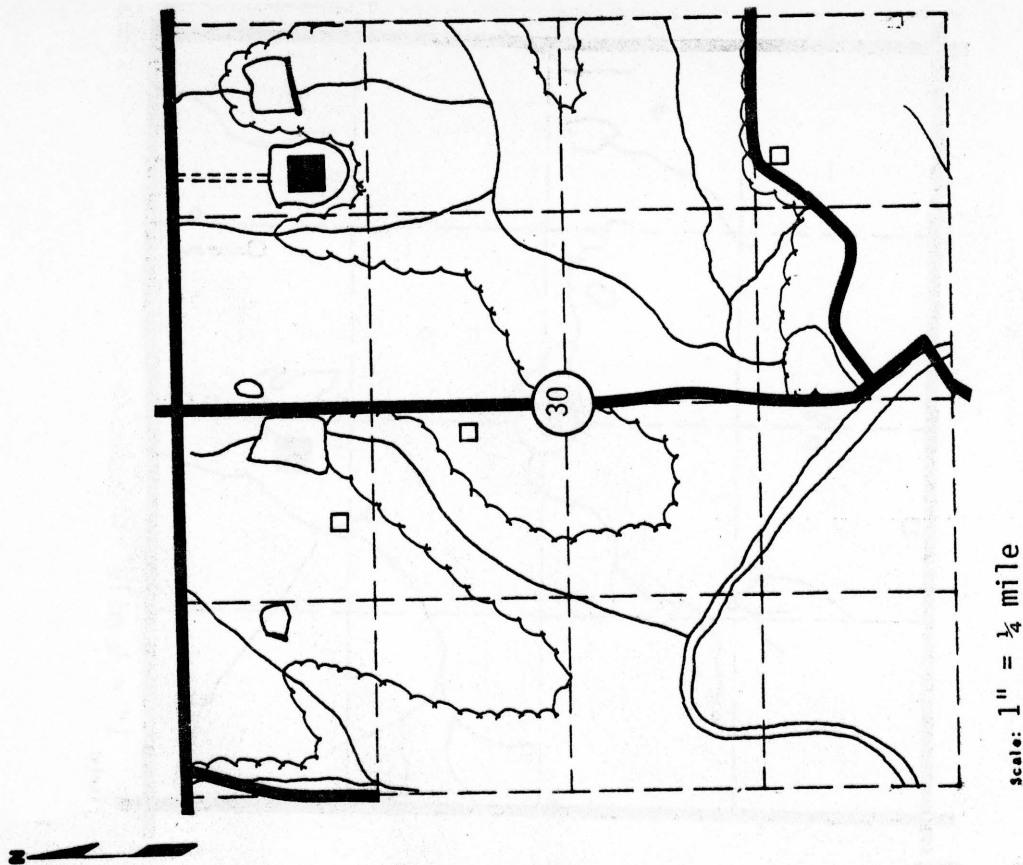
scale: $1'' = \frac{1}{4}$ mile

Ls+9
 PSD
 Site No. _____ Date Nov., 1974
 Material Limestone County Miami
 Location NE 1/4 Sec. 30 Twp. 18S Range 24E
 Owner Raymond Rodewald, Rt. 2, Paola, Ks. address _____
 name Dry Accessibility Good VI
 Nature of Deposit _____ Site Located on Plate _____
 Status of Site Open Materials Site; Sampled

[illegible]

Geological Age Pennsylvanian
Geological Source Swope Limestone Formation-Bethany Falls Ls. Mbr.
Material Similar To SHC Lab No. 74-1181

Specific Gravity (Sat.)	2.41 - 2.48	(dry)	2.33 - 2.44
Los Angeles Wear	38		
Absorption	3.5	Soundness	0.98
Wt. Cu.Ft.		Str. Ratio	
Remarks			



Ls+10

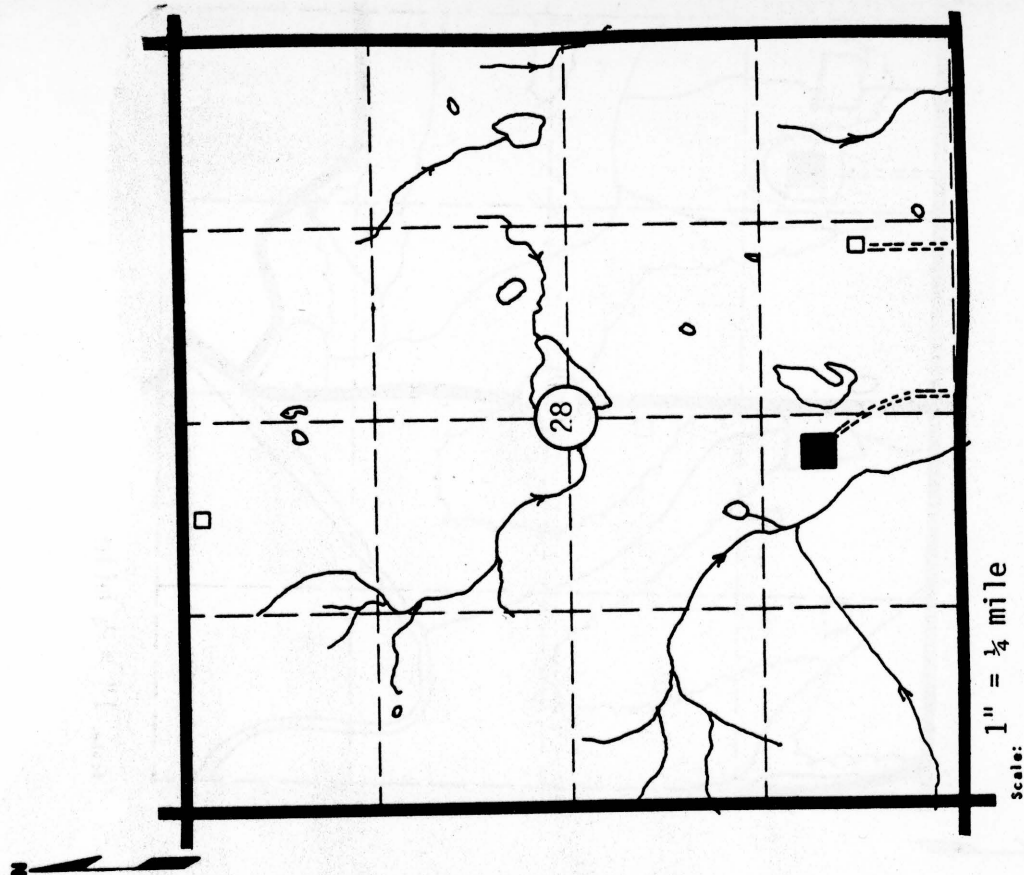
Pdw _____ Site No. _____ Date Nov., 1974
Material Limestone County Miami
Location SW $\frac{1}{4}$ Sec. 28 Twp. 18S Range 25E
Owner George F. Kotwitz & Wife, Rt. 1, Drexel, Mo. address _____
name Dry accessibility Good VI
Nature of Deposit _____ Site Located on Plate _____
Status of Site Open Materials Site; Sampled

EXPLORATION DATA

[illegible]

CORRELATION DATA

Geological Age	Pennsylvanian		
Geological Source	Dennis Ls. Formation-Winter set Ls. Mbr.		
Material Similar To	SHC Form 619, No. 61-21		
Specific Gravity (Sat.)	2.59	(dry)	2.53
Los Angeles Wear	28.6		
Absorption	2.51	Soundness	0.95
wt. Cu.ft.	Str. Ratio		
Remarks			



MATERIAL SITE DATA FORM

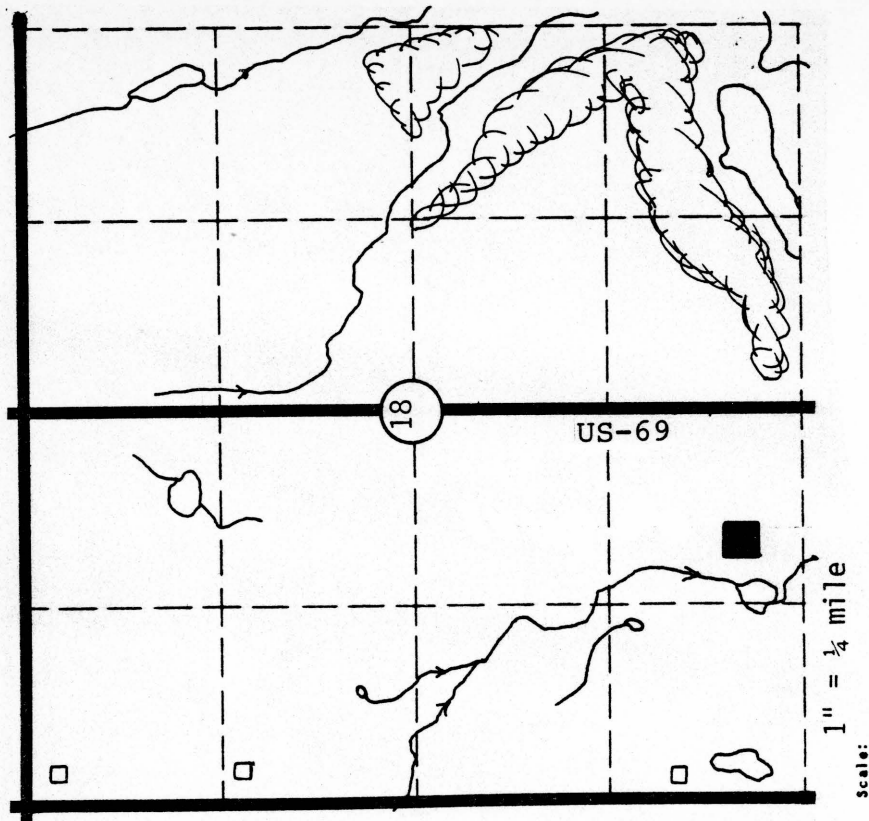
LS+11
PdW
Site No. _____ Date Nov., 1974
Material Limestone County Miami
SW $\frac{1}{4}$ Sec. 18 Twp. 19S Range 25E
Location _____
Owner Ivan M. Wade & Wife, Rt. 38, LaCygne, Ks. address _____
name _____
Nature of Deposit Dry Accessibility Good Site Located on Plate VI
Open Materials Site; Sampled
Status of Site _____

EXPLORATION DATA

[illegible]

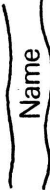
CORRELATION DATA

Geological Age Pennsylvanian
 Geological Source Dennis Ls. Formation-Winterset Ls, Mbr.
 Material Similar To SHC Form 619, No. 61427
 Specific Gravity (Sat.) 2.56 (Dry) 2.60
 Los Angeles Wear 29.0
 Absorption 2.5 Soundness 0.97
 Wt. Cu.ft. Str. Ratio
 Remarks



OPEN MATERIALS SITES; NOT SAMPLED

LEGEND

	Trail or lane		Open materials sites; not sampled
	Road		Open materials sites; sampled
	Railroad		Prospective materials sites; sampled
	Hedge or trees		Center of section
	Major streams		Dwelling
	Intermittent streams		Cemetery
	Pond or lake		School
			Church
			Town or city

LS+12

FW _____ Date Nov., 1974
 Limestone _____ County Miami
 Material _____
 Location NE 1/4 Sec. 27 Twp. 15S Range 22E
 Owner Melvin James Lavery & Wife, % Francis L. Lavery, 5516 Ash
 name _____ address MISSION, KS.
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

[illegible]

CORRELATION DATA

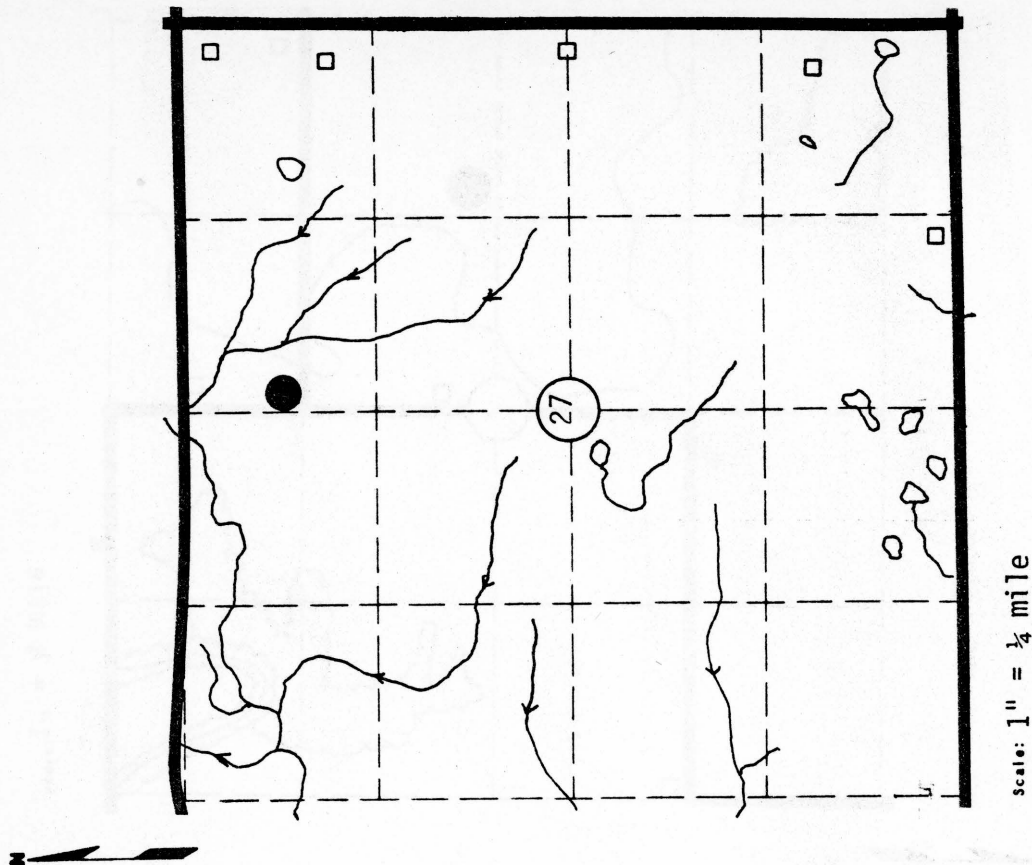
Pennsylvanian
 Geological Age _____
 Wyandotte Ls. Formation
 Geological Source _____
 Material Similar To _____

 Specific Gravity (Sat.) _____ (Dry) _____

 Los Angeles Wear _____
 Absorption _____ Soundness _____

 Wt. Cu.Ft. _____ Str. Ratio _____

 Remarks _____



Ls+13

Site No. FW Date Nov., 1974
 Material Limestone County Miami
 Location SE $\frac{1}{4}$ Sec. 7 Twp. 16S Range 23E
 Owner Hulda Martin, 125 S. Cherry, Olatha, Ks. address _____
 name Dry Fair I
 Nature of Deposit _____ Accessibility _____ Site Located on Plate _____
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

[illegible]

CORRELATION DATA

Geological Age

Pennsylvanian

Wyandotte Ls. Formation

Material similar to _____

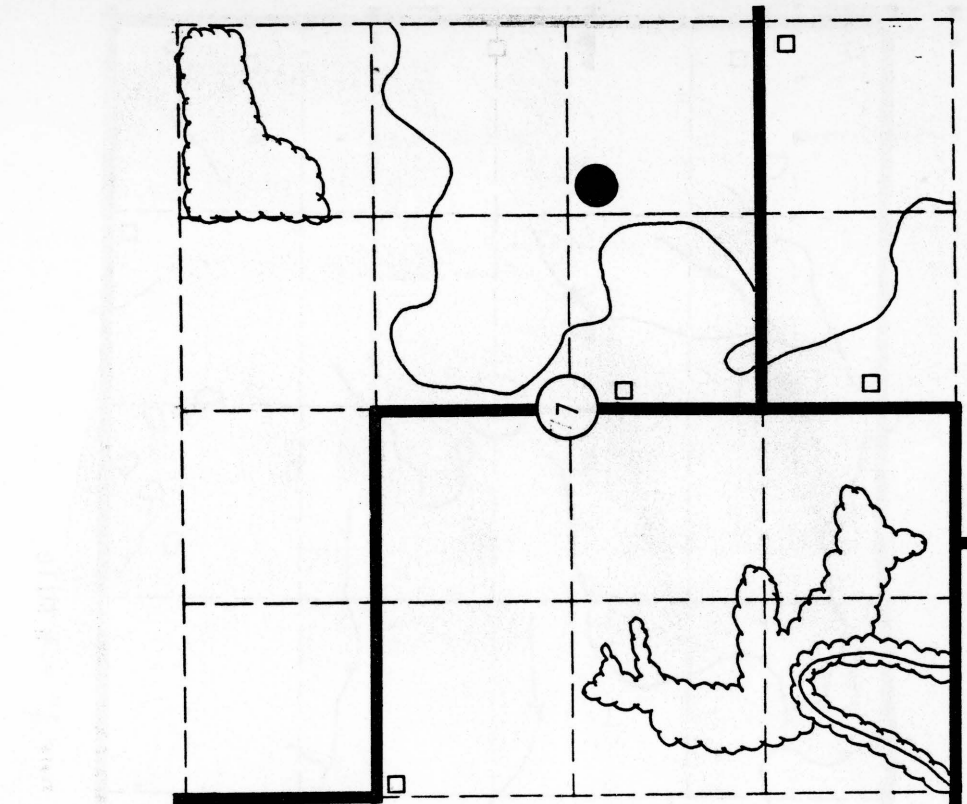
Specific Gravity (Sat.) _____ (Dry) _____

Los Angeles Year _____

_____ Absorption _____ Soundness _____

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

Remarks _____



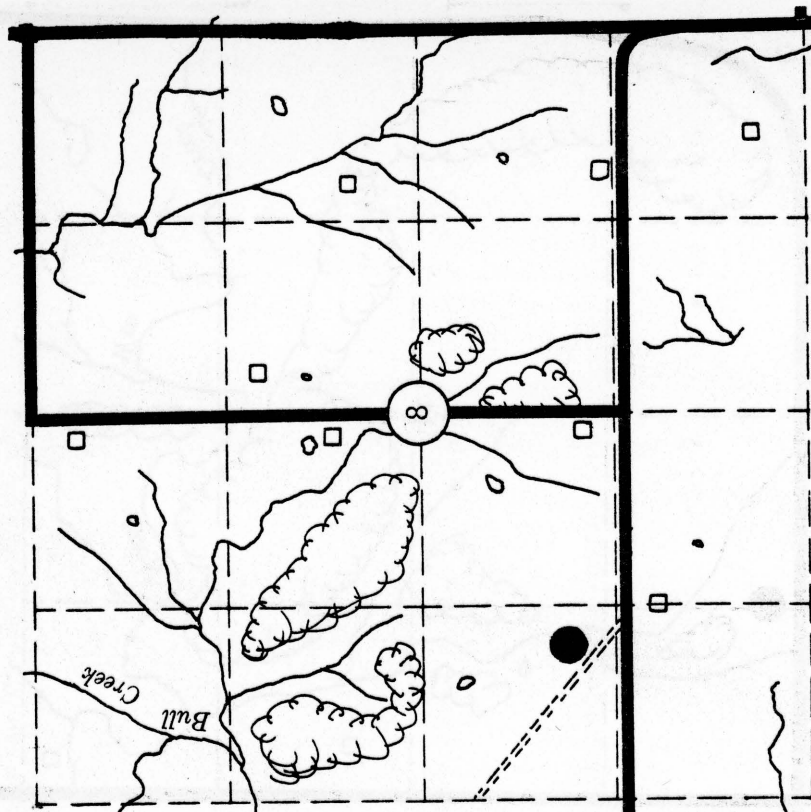
scale: 1" = $\frac{1}{4}$ mile

Ls+14

TW _____ Date Nov., 1974
 Limestone _____ County Miami
 SW $\frac{1}{4}$ _____ Sec. 8 _____ Twp. 16S _____ Range 23E
 Location _____
 Owner _____ Name _____ address _____
 Nature of Deposit Dry Accessibility Good Site Located on Plate L
 Status of Open Materials Site; Not Sampled

[illegible]

Pennsylvanian
 Wyandotte Ls. Formation
 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

Ls+15

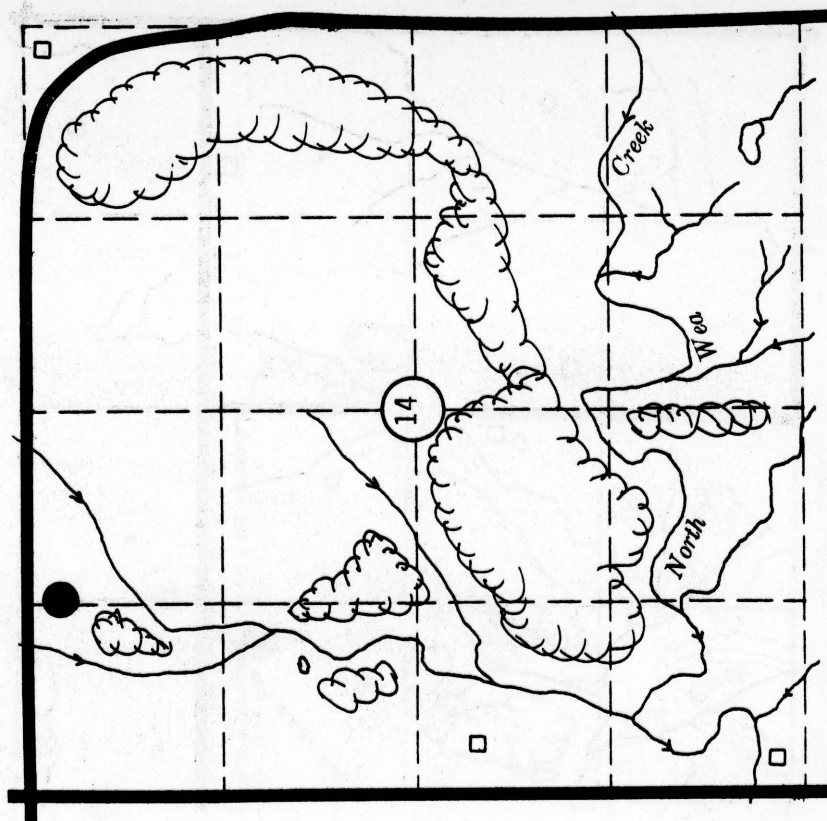
FW _____ Date Nov., 1974
 Site No. _____
 Material Limestone County Miami
 Location NW $\frac{1}{4}$ Sec. 14 Twp. 16S Range 24E
 Owner _____
Frank Gustafson, 5401 W. 68th, Prairie Village, Ks.
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate II
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

[illegible]

CORRELATION DATA

Geological Age Pennsylvanian
 Geological Source Wyandotte Ls. Formation-Argentine Ls. Member
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



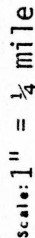
Scale: 1" = $\frac{1}{4}$ mile

LS+16

Site No. Ep Date Nov., 1974
Material Limestone County Miami
Location NW $\frac{1}{4}$ Sec. 7 Twp. 17S Range R22E
Owner James W. Haight, Rt. 5, Paola, Kansas address _____
Nature of Deposit Dry Accessibility Good Site Located on Plate III
Status of Site Open Materials Site; Not Sampled

[illegible]

Pennsylvanian
 Geological Age
 Plattsburg Formation-Spring Hill Mbr.
 Geological Source
 Material Similar To
 Specific Gravity (Sat.) (Dry)
 Los Angeles Near
 Absorption Soundness
 Wt. Cu.Ft. Str. Ratio
 Remarks



Ls+17

FW _____ Date Nov. 1, 1974

Site No. _____

Material Limestone County Miami

Location NE 1/4 Sec. 12 Twp. 17S Range 22E

Owner A. H. June, Rt. 1, Paola, Ks. name _____ address _____

Nature of Deposit Dry Accessibility Good Site Located on Plate III

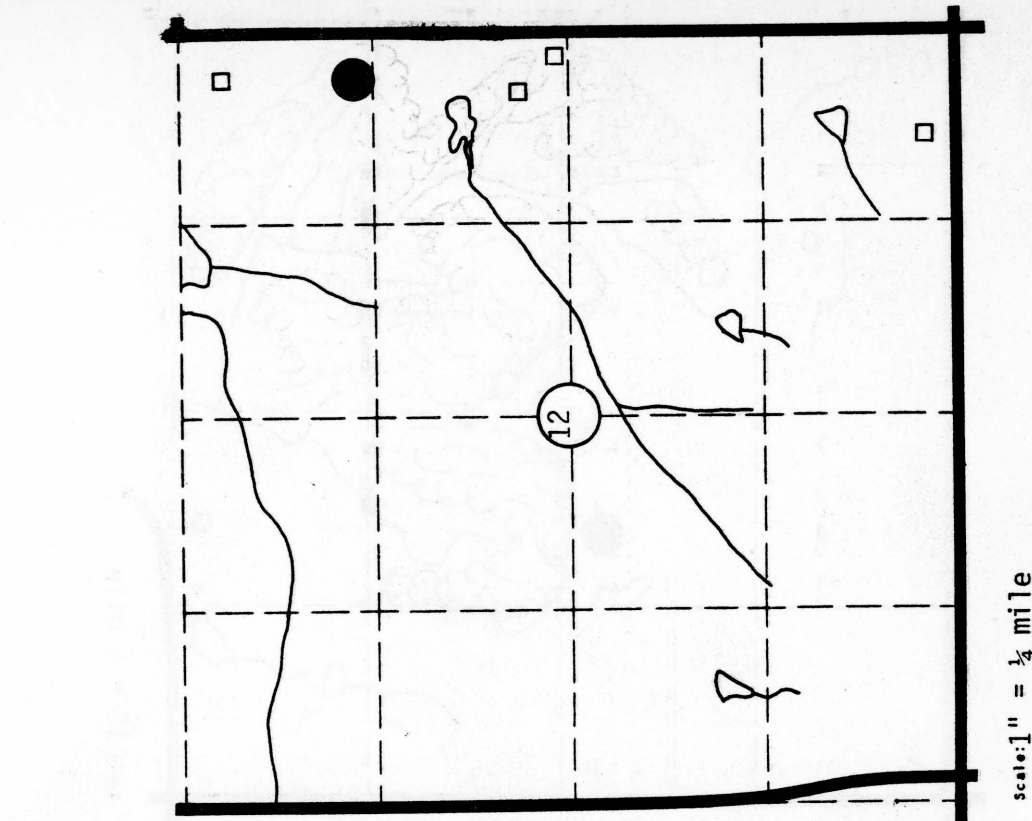
Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

[illegible]

CORRELATION DATA

Geological Age Pennsylvanian
 Geological Source Wyandotte Ls. Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.ft. _____ Str. Ratio _____
 Remarks _____



scale: 1" = $\frac{1}{4}$ mile

Ls+18

Site No. Pi Date Nov., 1974
 Material Limestone County Miami
 Location SW $\frac{1}{4}$ Sec. 29 Twp. 17S Range 22E
 Owner E. R. Feebeck & Wife, Rt. 1, Osawatomie, Ks. address
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

[illegible]

CORRELATION DATA

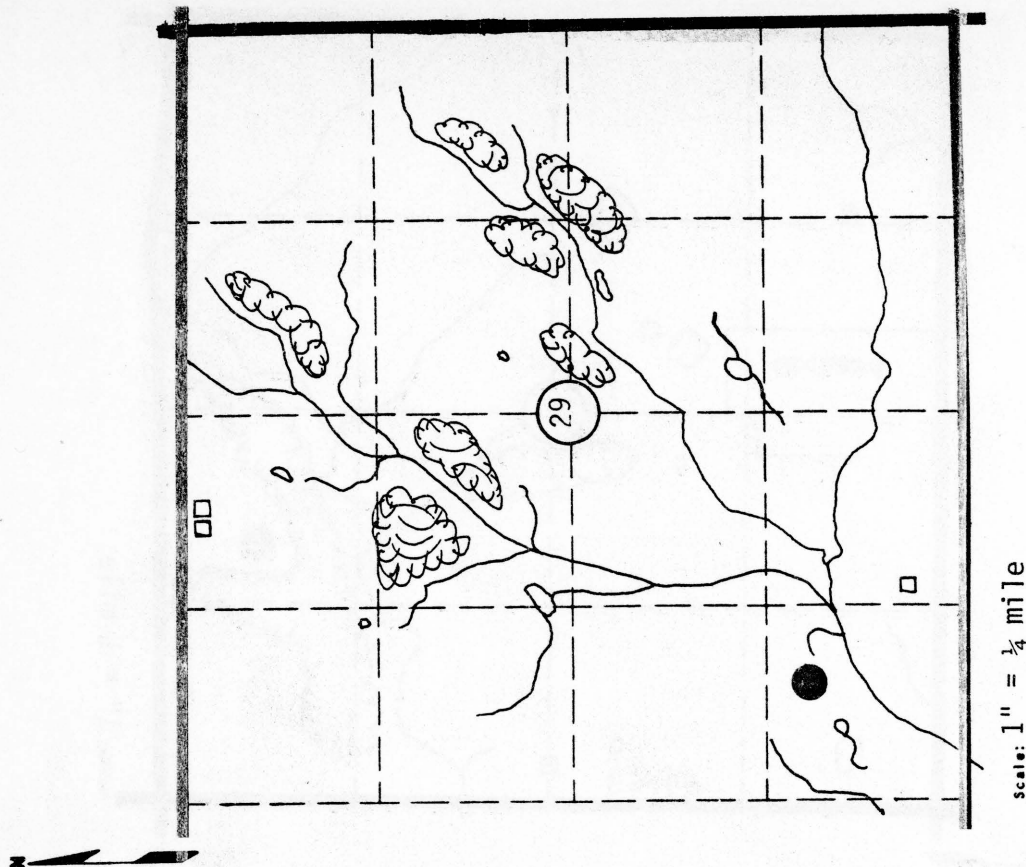
Pennsylvania _____
 Geological Age _____
 Iola Limestone Formation-Raytown Ls. Mbr. _____
 Geological Source _____
 Material Similar To _____

(b) (7) (D), (b) (7) (F), (b) (7) (G)

Los Angeles Near _____
Assortion _____
Soundness _____

Wt. Cu.ft. _____ Str. Ratio _____

Remarks _____



Scale: $1'' = \frac{1}{4}$ mile

Ls+19

FW _____ Date Nov. 3, 1974
 Limestone _____ County Miami
 Material _____
 Location SW $\frac{1}{4}$ Sec. 17 Twp. 17S Range 25E
 Owner Leo Frick, Louisburg, Ks. address _____
 Nature of Deposit Dry Accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Not Sampled

[illegible]

Pennsylvanian _____
 Geological Age _____
 Wyandotte Ls. Formation-Argentine Ls. Mbr. _____
 Geological Source _____
 Material Similar To _____

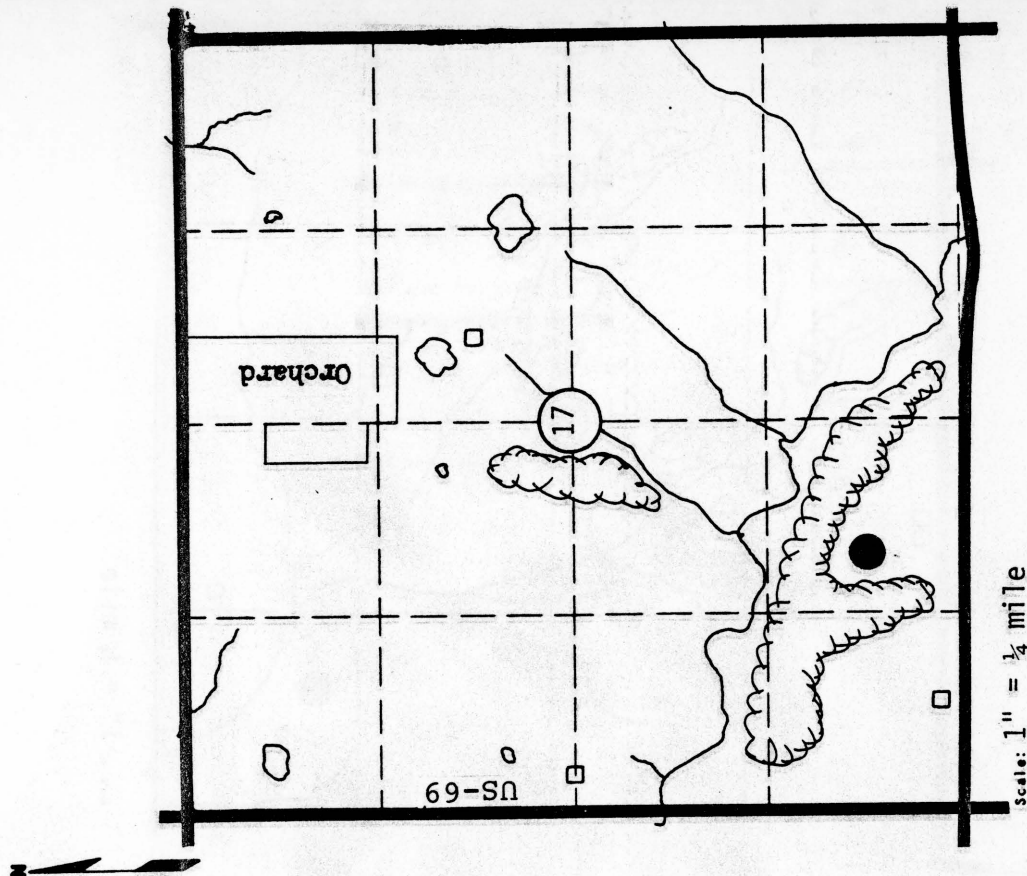
 Specific Gravity (Sat.) _____ (Dry) _____

 Los Angeles Wear _____

 Absorption _____ Soundness _____

 Wt. Cu.Ft. _____ Str. Ratio _____

 Remarks _____

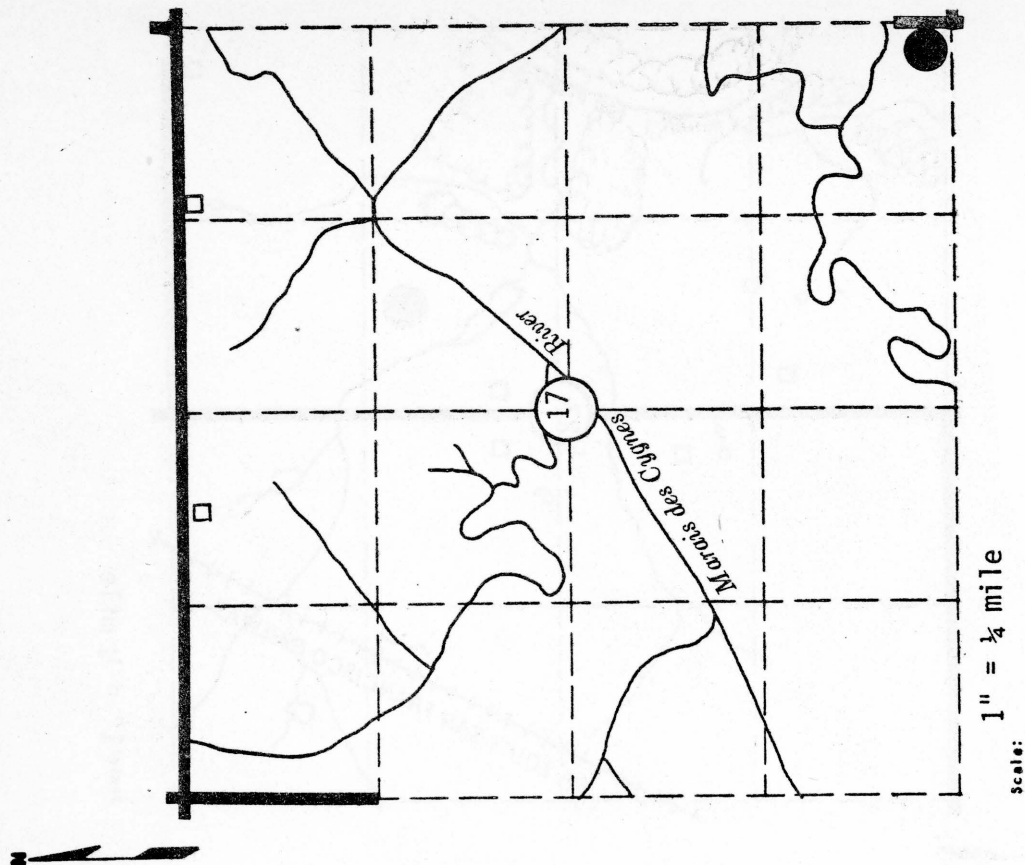


$$\underline{Ls+20}$$

PdW Site No. Nov. , 1974
Gravel Miami
Material County
SE 1/4 17 18S 23E
Location Twp. Range
Charles Whiteford, 428 W. Arch, Nevada, Mo.
Owner name address
Dry Good V
Mature of Deposit Accessibility Site Located on Plate
Open Materials Site; Not Sampled
Status of site

[illegible]

Geological Age _____
 Geological Source Dennis Limestone Formation-Winterset Ls. Mbr.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.-Ft. _____ Str. Ratio _____
 Remarks _____



$$\underline{Ls+21}$$

EXPLORATION DATA

CORRELATION DATA

scale: 1" = $\frac{1}{4}$ mile



Ls+22

FW _____
 Site No. _____ Date Nov., 1974
 Material Limestone County Miami
 Location SW $\frac{1}{4}$ Sec. 11 Twp. 19S Range 21E
 Owner _____
 Name Herschel R. Hoy, et al, LaCygne, Ks. address _____
 Wet _____
 Nature of Deposit Wet Accessibility Good Site Located on Plate V
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

[illegible]

CORRELATION DATA

Geological Age Pennsylvanian
Geological Source Wyandotte Ls. Formation-Argentine Ls. Mbr.

Material Similar To _____

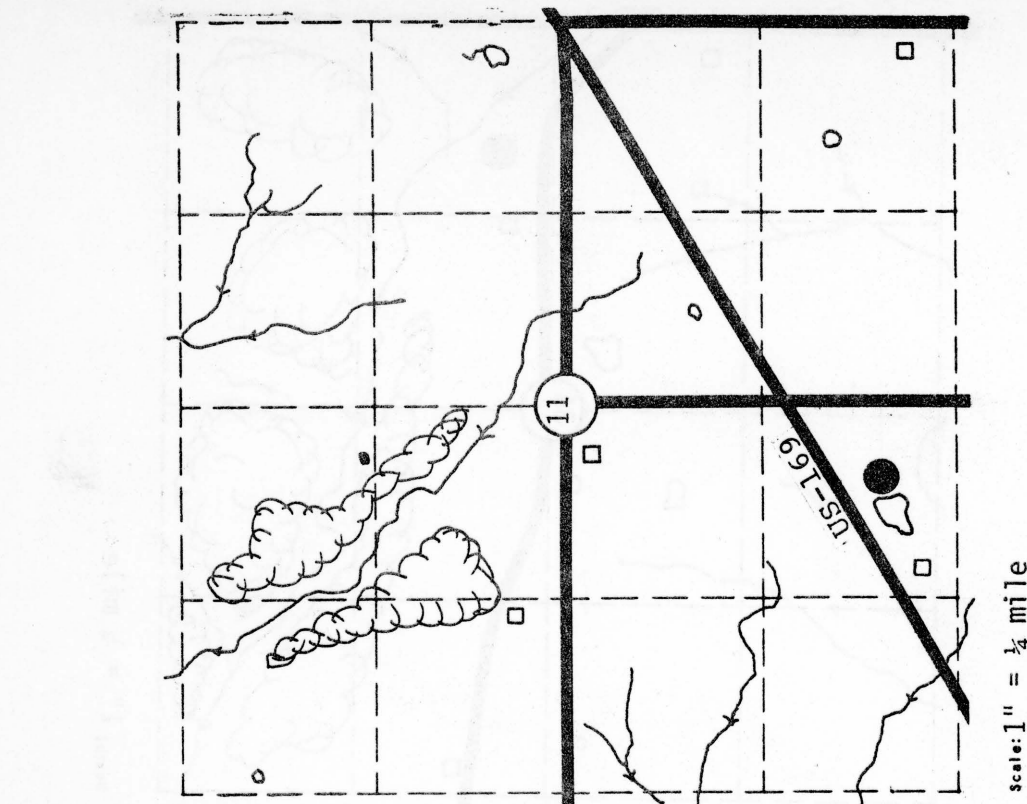
Specific Gravity (sat.) _____ (Dry) _____

Los Angeles Near

Absorption	Soundness

Mt. Cu.ft.		Str. Ratio	
1	100	1	100
2	200	2	200
3	300	3	300
4	400	4	400
5	500	5	500
6	600	6	600
7	700	7	700
8	800	8	800
9	900	9	900
10	1000	10	1000
11	1100	11	1100
12	1200	12	1200
13	1300	13	1300
14	1400	14	1400
15	1500	15	1500
16	1600	16	1600
17	1700	17	1700
18	1800	18	1800
19	1900	19	1900
20	2000	20	2000
21	2100	21	2100
22	2200	22	2200
23	2300	23	2300
24	2400	24	2400
25	2500	25	2500
26	2600	26	2600
27	2700	27	2700
28	2800	28	2800
29	2900	29	2900
30	3000	30	3000
31	3100	31	3100
32	3200	32	3200
33	3300	33	3300
34	3400	34	3400
35	3500	35	3500
36	3600	36	3600
37	3700	37	3700
38	3800	38	3800
39	3900	39	3900
40	4000	40	4000
41	4100	41	4100
42	4200	42	4200
43	4300	43	4300
44	4400	44	4400
45	4500	45	4500
46	4600	46	4600
47	4700	47	4700
48	4800	48	4800
49	4900	49	4900
50	5000	50	5000
51	5100	51	5100
52	5200	52	5200
53	5300	53	5300
54	5400	54	5400
55	5500	55	5500
56	5600	56	5600
57	5700	57	5700
58	5800	58	5800
59	5900	59	5900
60	6000	60	6000
61	6100	61	6100
62	6200	62	6200
63	6300	63	6300
64	6400	64	6400
65	6500	65	6500
66	6600	66	6600
67	6700	67	6700
68	6800	68	6800
69	6900	69	6900
70	7000	70	7000
71	7100	71	7100
72	7200	72	7200
73	7300	73	7300
74	7400	74	7400
75	7500	75	7500
76	7600	76	7600
77	7700	77	7700
78	7800	78	7800
79	7900	79	7900
80	8000	80	8000
81	8100	81	8100
82	8200	82	8200
83	8300	83	8300
84	8400	84	8400
85	8500	85	8500
86	8600	86	8600
87	8700	87	8700
88	8800	88	8800
89	8900	89	8900
90	9000	90	9000
91	9100	91	9100
92	9200	92	9200
93	9300	93	9300
94	9400	94	9400
95	9500	95	9500

Remarks

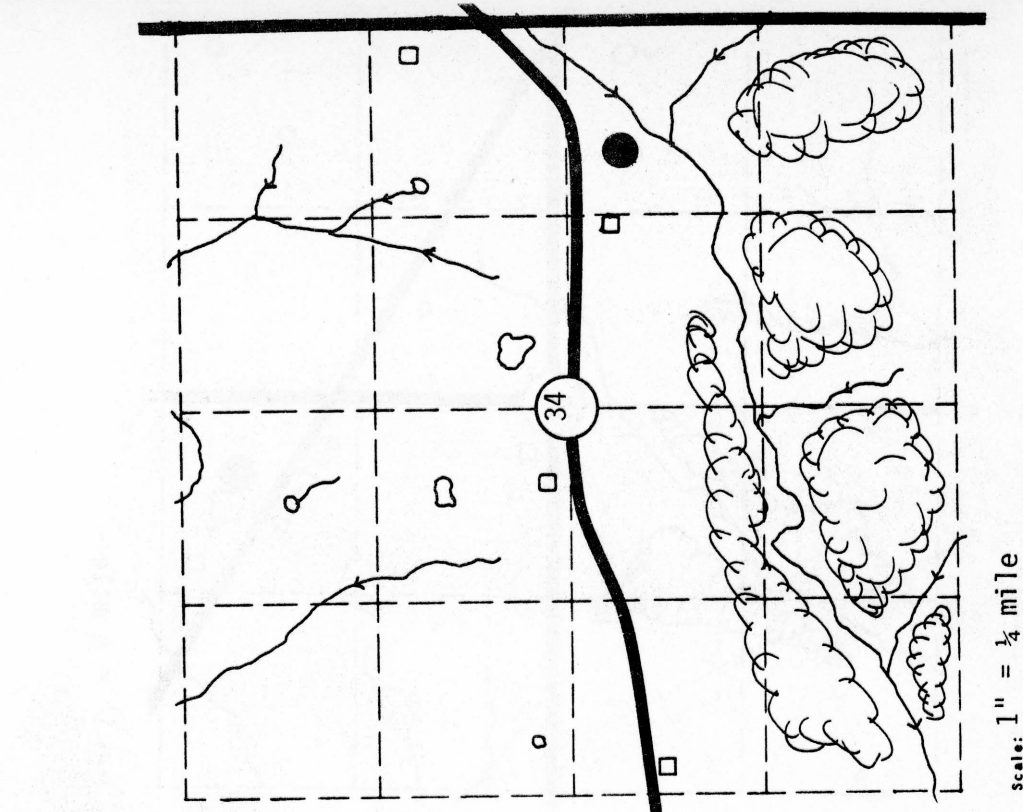


Ls+23

PDW _____ Date Nov., 1974
 Site No. _____
 Material Limestone County Miami
 Location SE $\frac{1}{4}$ Sec. 34 Twp. 18S Range 24E
 Owner Robert C. Aitchison, 6837 Lindoln, Prairie Village, Ks.
 name _____ address _____
 Nature of Deposit Dry Accessibility Good Site Located on Plate VI
 Status of Site Open Materials Site; Not Sampled

[illegible]

Geological Age Pennsylvanian
 Geological Source Dennis Limestone Formation-Winterset Ls. Mbr.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.ft. _____ Str. Ratio _____
 Remarks _____



PROSPECTIVE MATERIALS SITES; SAMPLED

LEGEND

	Trail or lane		Open materials sites; sampled
	Road		Open materials sites; not sampled
	Railroad		Prospective materials sites; sampled
	Hedge or trees		Center of section
	Major streams		Dwelling
	Intermittent streams		Cemetery
	Pond or lake		School
			Church
			Town or city

Ls+24

FDW _____ Date Nov., 1974

Site No. _____

Material Limestone County Miami

Location SW 1/4 Sec. 31 Twp. 18S Range 25E

Owner Maude D. Hurt, et al, Drexel, Mo. address _____

Nature of Deposit Dry accessibility Good Site Located on Plate VI

Status of Site Prospective Materials Site; Sampled

EXPLORATION DATA

[illegible]

CORRELATION DATA

Geological Age	
Pennsylvanian	
Dennis Limestone Formation-Winteraset Ls. Mbr.	

Material Similar To _____

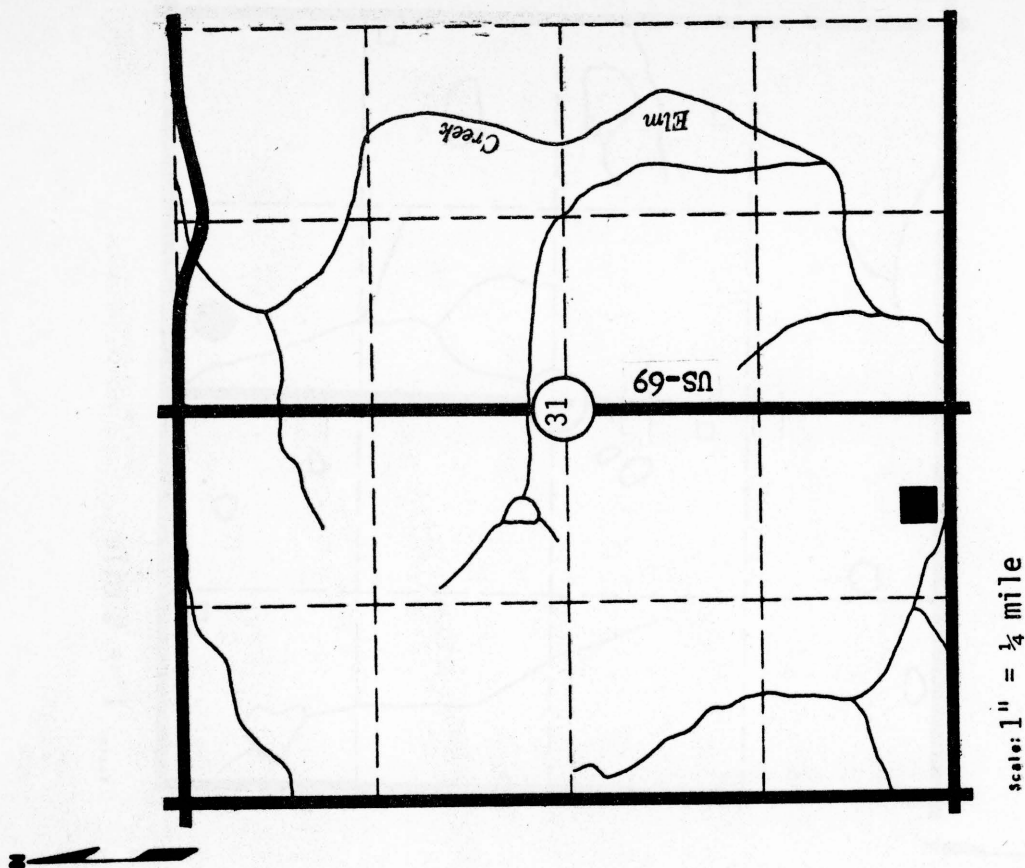
Specific Gravity (Sat.) _____ (Dry) _____

100A 00106V 001

Absorption	Soundness

Wt. Cu.Ft. _____ Str. Ratio _____

Remarks



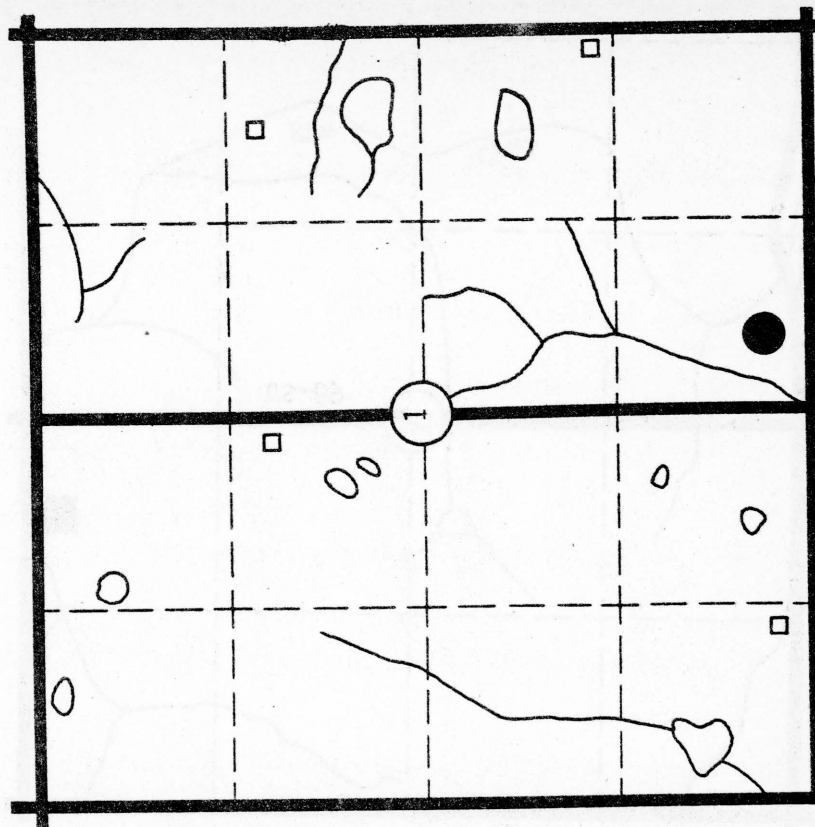
scale: 1" = $\frac{1}{4}$ mile

LS+25
 Site No. pdw Date Nov., 1974
 Material Limestone County Miami
 Location SE 1/4 Sec. 1 Twp. 19S Range 24E
 Owner Lester James Black, % Bessie Collons, Box 145, Louisville, Ky.
 Name _____
 Nature of Deposit Dry Accessibility Good Site Located on Plate VI
 Status of Site Prospective Materials Site; Sampled

[illegible]

CORRELATION DATA

Geological Age Pennsylvanian
Geological Source Dennis Limestone Formation-Winterset Ls. Mbr.
Material Similar To _____
Specific Gravity (Sat.) _____ (dry) _____
Los Angeles Wear _____
Absorption _____ Soundness _____
Wt. Cu.ft. _____ Str. Ratio _____
Remarks _____



scale: $1'' = \frac{1}{4}$ mile

GLOSSARY

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

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

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

Algal Limestone: A limestone composed largely of remains of calcium-secreting algae or one in which such algae serve to bind together the fragments of other calcium-secreting forms.

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

Antecedent Stream: Established previous to the displacement of the terrain by faulting or folding.

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

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

Brachiopod: Shelled animal of marine origin, having two unequal shells or valves each of which normally are bilaterally symmetrical.

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

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

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

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

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

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

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.

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

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

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 qualification, a siliceous composition is implied.

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

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

Fluvial deposit: A sedimentary deposit consisting of material transported by, suspended in, or laid down by a river stream.

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.

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

Gastropod: A member of the phylum Mollusca, class Gastropoda: usually with a calcareous exoskeleton or shell, which is asymmetrically coiled and without internal chambers or partitions.

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.

Grading A, B, C, and D: Determined by the abrasive charge for the Los Angeles wear test as specified in A.A.S.H.O. designation T96 and section 1001 of the State Highway Commission of Kansas, Standard Specifications, 1973 edition.

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

Headwater: The source (or sources) and upper part of a stream (esp. of a large stream or river), including the upper drainage basin; a stream from this source.

Karst topography: A type of topography that is formed over limestone, dolomite, or gypsum by dissolving or solution, and that is characterized by closed depressions or sink holes, caves, and underground drainage.

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

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

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

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

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

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.

Oölitic limestone: A textural term for rock containing small, rounded grains that resemble fish eggs.

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

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.

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

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.

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

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

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

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

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

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

Selected References

- Abernathy, G. E., Jewett, J. M., and Schoewe, W. H. (1947) Coal Reserves in Kansas: Kansas Geological Survey Bull. 70 Pt. 1, 20 pp.
- American Association of State Highway Officials (1966) Standard Specifications for Highway Materials and Methods of Sampling and Testing: Pt. 1, 9th ed., 460 pp.
- Bukovatz, John E. (1969) Bridge Deck Deterioration Study: Kansas State Highway Commission: Report Pt. 4, 25 pp.
- Bukovatz, John E., Crumpton, Carl F., and Worley, Herbert E. (1973) Study of D-cracking in Portland Cement Concrete Pavements: Report 1, 30 pp.
- Frye, John C. and Leonard, A. Byron (1952) Pleistocene Geology of Kansas: Kansas Geological Survey Bull. 99, 230 pp.
- Hargradine, Gerald D. and Johnson, Dale R. (1966) Materials Inventory of Linn County, Kansas: State Highway Commission of Kansas Materials Inventory No. 5, 63 pp.
- Jewett, John M. and Schoewe, W. H. (1942) Kansas Mineral Resources for Wartime Industries Kansas Geological Survey Bull. 41, part 3, 180 pp.
- Jewett, John M. (1949) Oil and Gas in Eastern Kansas: Kansas Geological Survey Bull. 77, 308 pp.
- Jimenez, John and others (1972) Materials Inventory of Douglas County, Kansas: State Highway Commission of Kansas Materials Inventory No. 25, 91 pp.
- Merriam, Daniel F. (1963) The Geologic History of Kansas: Kansas Geological Survey Bull. 162, 317 pp.
- Miller, Don E. (1966) Geology and Ground-Water Resources of Miami County, Kansas: Kansas Geological Survey Bull. 181, 66 pp.
- Newell, N. D. and Jewett, J. M. (1935) The Geology of Johnson, Miami and Wyandotte Counties, Kansas: Kansas Geological Survey Bull. 48, 200 pp.
- Runnels, R. T. and Schleicher, J. A. (1956) Chemical Composition of Eastern Kansas Limestones: Kansas Geological Survey Bulletin 119, Part III, pp. 83-103.
- Stallard, Alvis H. and Kibby, Robert L. (1969) Materials Inventory of Franklin County, Kansas: State Highway Commission of Kansas Materials Inventory No. 18, 105 pp.