

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	◩	Prospective materials sites; not sampled
~~~~~ Name	Major streams	○ 5	Center of section
~~~~~	Intermittent streams	□	Dwelling
~~~~~	Pond or lake	⊕	Cemetery
		▣	School
		⊕	Church
		▣	Town or city

MATERIAL SITE DATA FORM

Site No. LS + 1 Date Nov. 2, 1977
PWC
 Material Limestone County Cowley
 Location W 1/2, NE 1/4 Sec. 1 Twp. 31S Range 3E
 Owner Paul W. Winter Box 18, Peace Valley, Missouri 65788
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Sampled

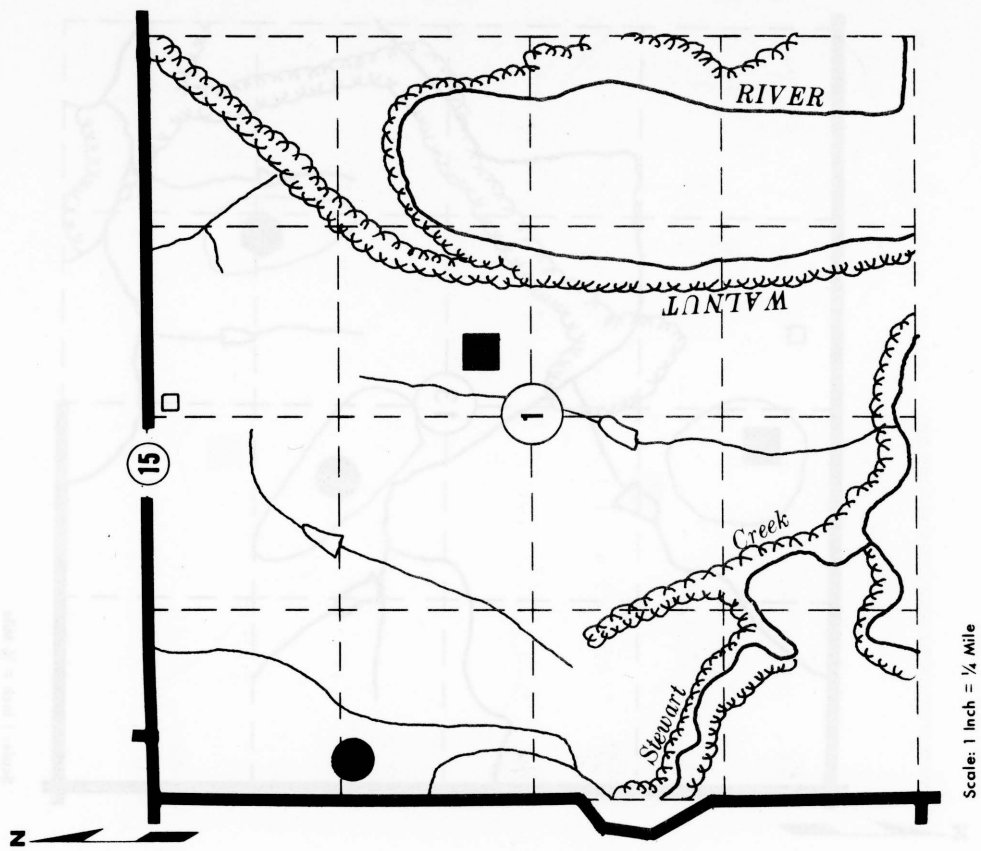
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Winfield Limestone - Cresswell Limestone MBR.
 Material Similar To SHC Lab No. 78374

Specific Gravity (Sat.) 2.44 (Dry) _____
 Los Angeles Wear 26.5
 Absorption 4.74 Soundness 0.91
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department No. 18-17



MATERIAL SITE DATA FORM

Site No. CG - 2 Date Nov. 2, 1977
Qtk
 Material Chert Gravel County Cowley
 Location NE 1/4, NW 1/4 Sec. 13 Twp. 31S Range 3E
 Owner Elbert Olson 904 Shadyway, Wichita, Kansas 67203
 name
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 address
 Status of Site Open Materials Site; Sampled

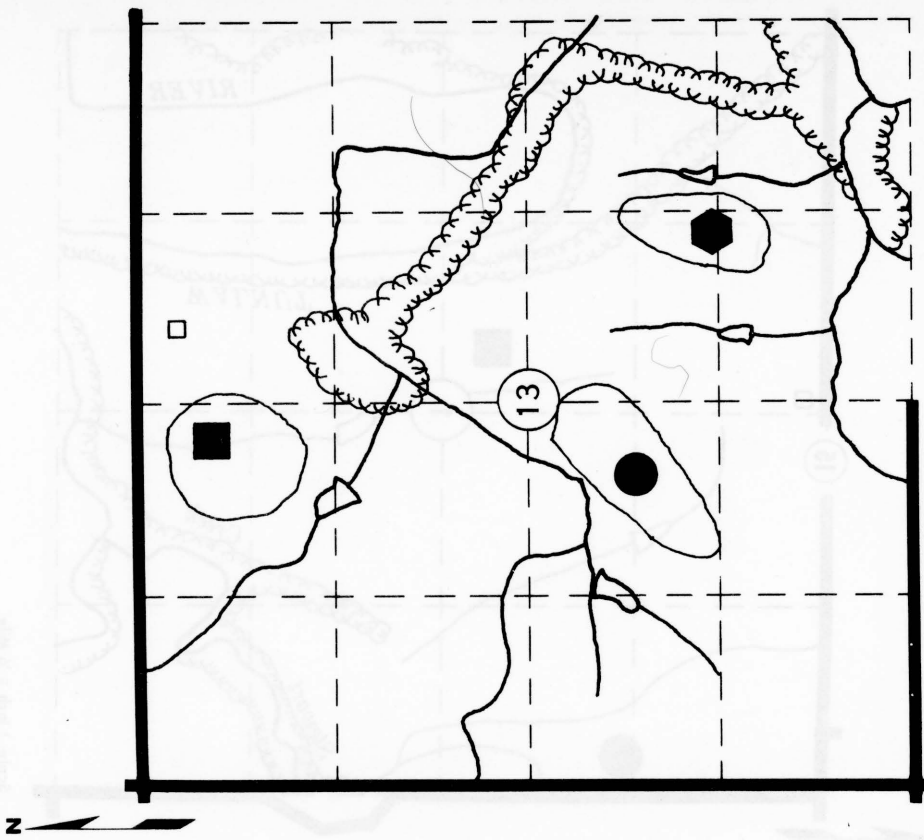
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Kansan Terrace
 Material Similar To SHC Lab No. 81625

Specific Gravity (Sat) 2.37 (Dry)
 Los Angeles Wear 32.6
 Absorption 5.94 Soundness 0.90
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department No. 18-14



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

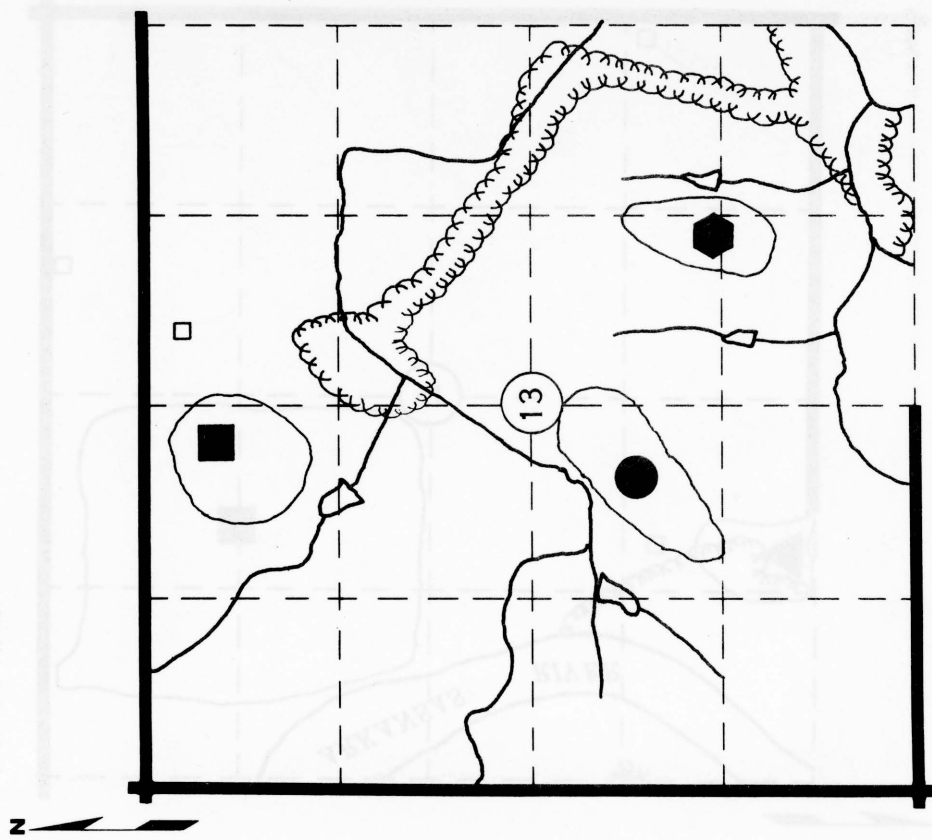
Site No. LS+2 Date Nov. 2, 1977
PWC County Cowley
 Material Limestone
 Location NE 1/4, NW 1/4 Sec. 13 Twp. 31S Range 3E
 Owner Elbert Olson 904 Shadyway, Wichita, Kansas 67203
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Winfield Limestone - Cresswell Limestone MBR.
 Material Similar To SHC Lab No. 81625
 Specific Gravity (Sat.) 2.37 (Dry) _____
 Los Angeles Wear 32.6
 Absorption 5.94 Soundness 0.90
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department No. 18-14



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

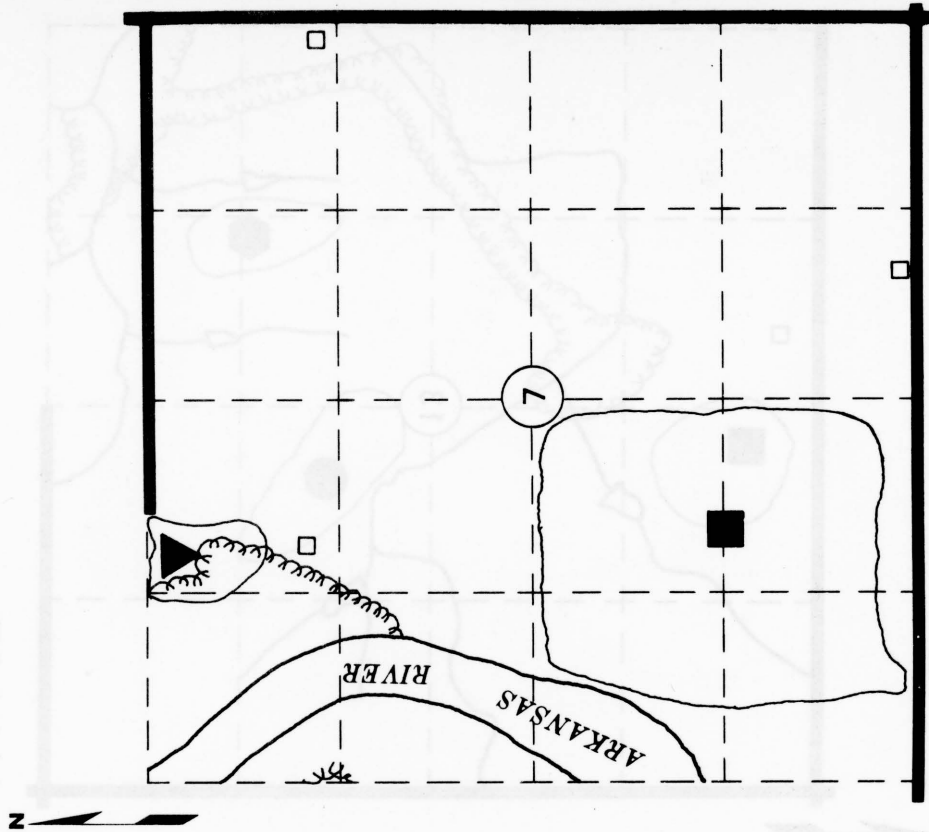
Site No. SG+3 Date Nov. 2, 1977
Qal
 Material Sand & Gravel County Cowley
 Location SW 1/4 Sec. 7 Twp. 32S Range 3E
 Owner Feaster Bros. Inc. Box 266, Oxford, Kansas 67119
 name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To SHC Lab No. 10001
 Specific Gravity (Sat) 2.61 (Dry) _____
 Los Angeles Wear 31.2
 Absorption 0.50 Soundness 0.97
 Wt. Cu. Ft. 112.2 Str. Ratio 1.54
 Remarks Materials Department No. 18-33



MATERIAL SITE DATA FORM

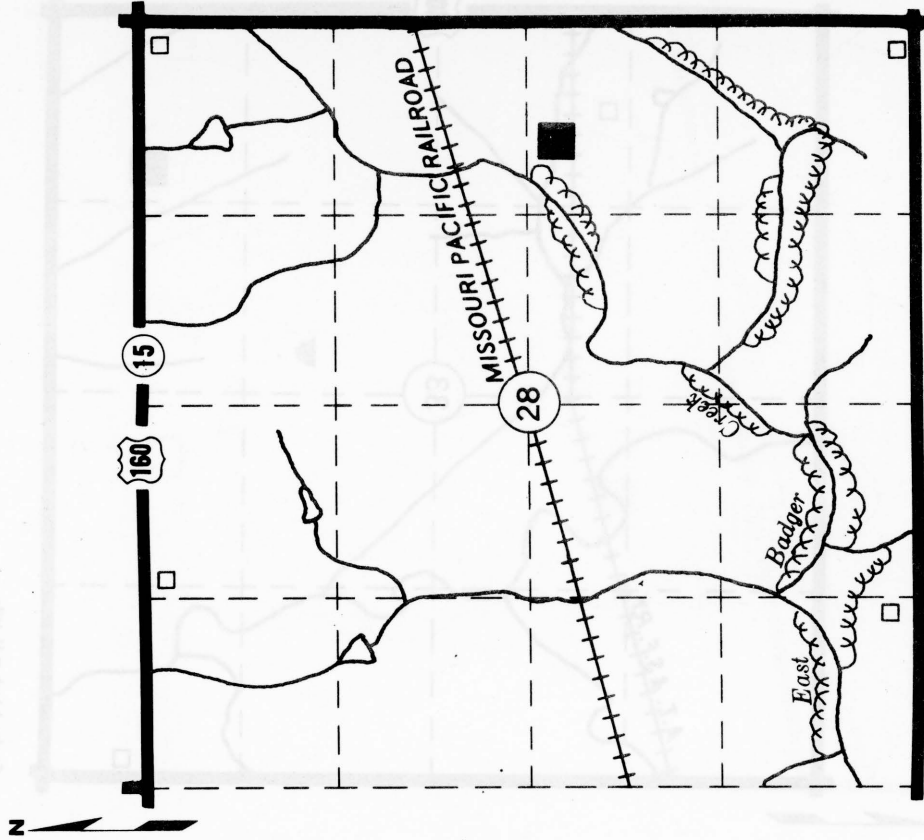
Site No. LS+4 Date Nov. 2, 1977
Pb
 Material Limestone County Cowley
 Location NE 1/4, SE 1/4 Sec. 28 Twp. 32S Range 5E
 Owner Howard E. Snyder Rt. 5, Winfield, Kansas 67156
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate V
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Barneston Formation - Fort R. Ley Limestone MBR.
 Material Similar To SHC Lab No. 81592
 Specific Gravity (Sat.) 2.44 (Dry) _____
 Los Angeles Wear 4.06
 Absorption 5.00 Soundness 0.92
 Wt. Co. Ft. _____ Str. Ratio _____
 Remarks Materials Department Site No. 18-7



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+5 Date Nov. 2, 1977
Pb
 Material Limestone County Cowley
 Location SW 1/4, SE 1/4, SE 1/4 Sec. 33 Twp. 31S Range 6E
 Owner Blanche M. Lawson Rt. 1, Burden, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate V
 Status of Site Open Materials Site; Sampled

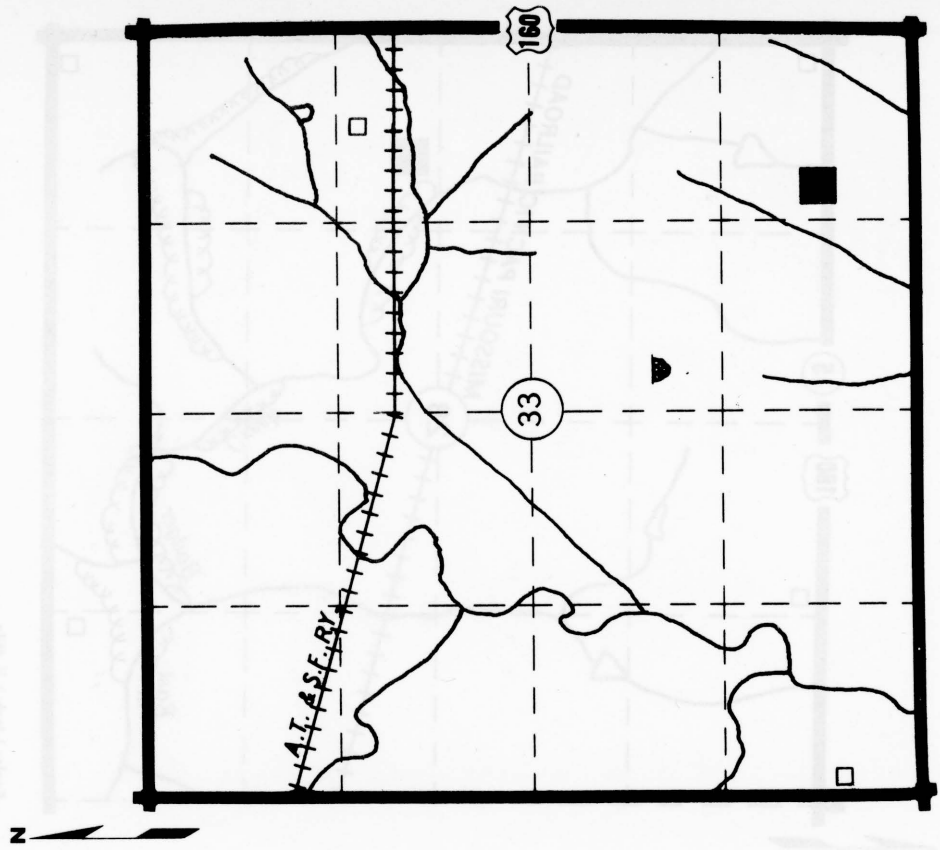
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Barneston Formation - Fort Riley Limestone MBR.
 Material Similar To SHC No. 81611

Specific Gravity (Sat.) 2.30 (Dry) _____
 Los Angeles Wear 35.1
 Absorption 8.99 Soundness 0.96
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department No. 18-36



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

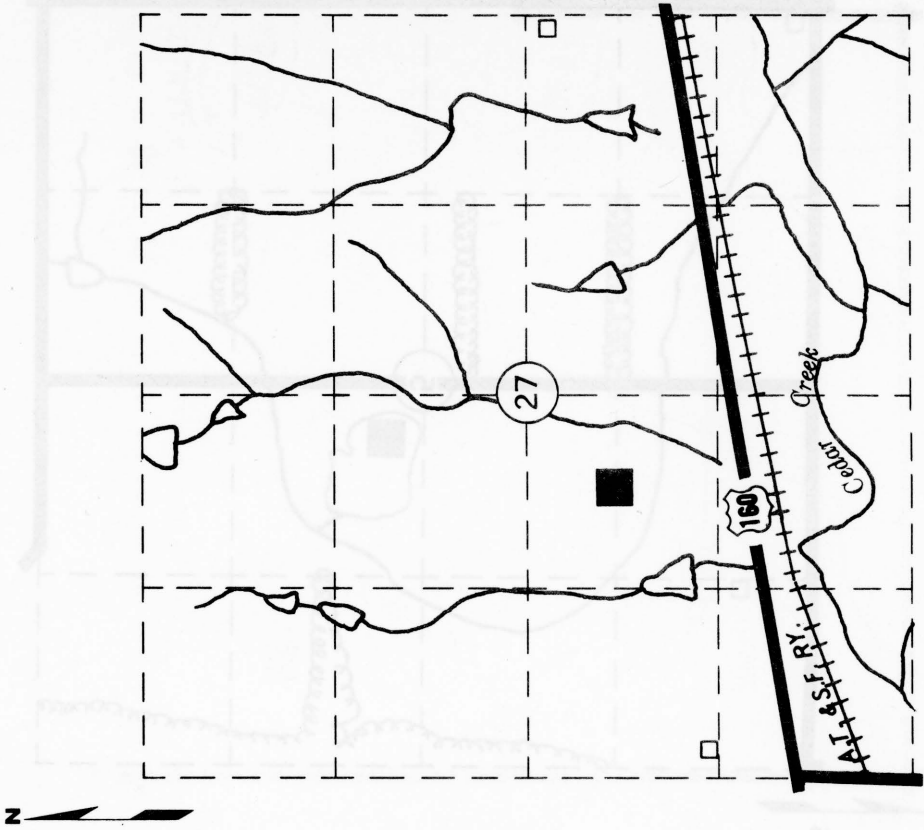
Site No. LS+6 Date Nov. 2, 1977
PC
 Material Limestone County Cowley
 Location NE 1/4, SW 1/4 Sec. 27 Twp. 31S Range 7E
 Owner Flora A. McClure R. #3, Winfield, Kansas
 Nature of Deposit Dry Accessibility Good Site Located on Plate VI
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Crouse Limestone Formation
 Material Similar To SHC No. 100372
 Specific Gravity (Sat.) 2.30 (Dry)
 Los Angeles Wear 33.2
 Absorption 4.73 Soundness 0.97
 Wt. Cu. Ft. Str. Ratio
 Remarks Materials Department No. 18-4



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

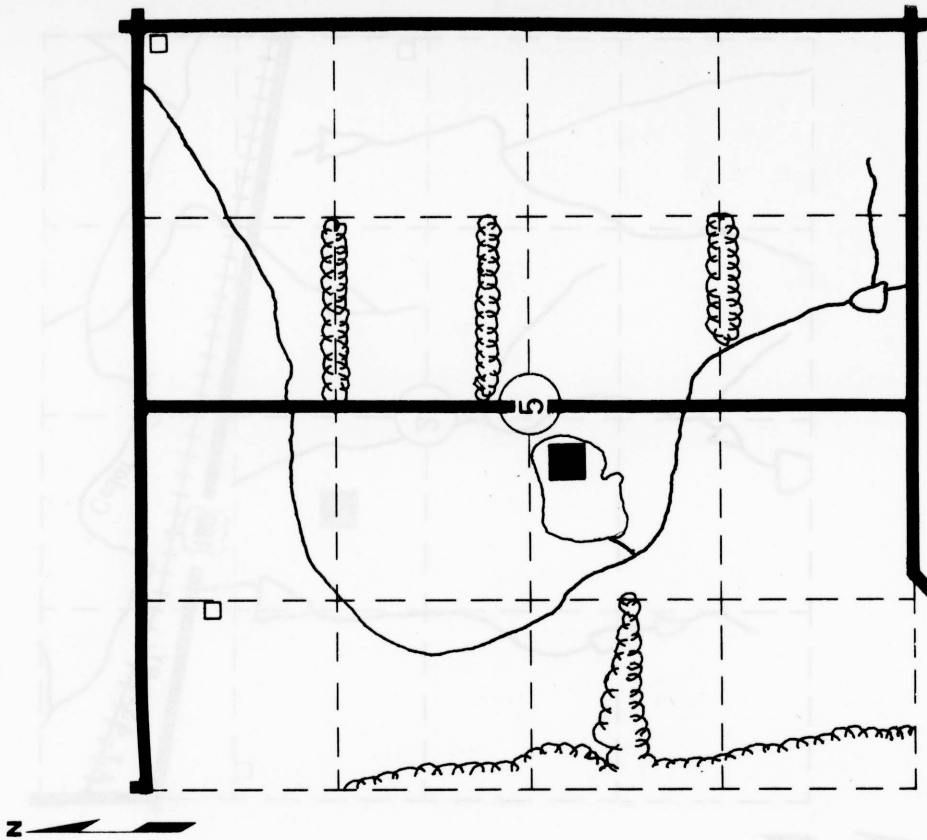
Site No. SG+7 Date Nov. 2, 1977
Qal
 Material Sand & Gravel County Cowley
 Location NE 1/4, SW 1/4 Sec. 5 Twp. 34S Range 3E
 Owner Max E. Abrams R. 2, Arkansas City, Kansas 67005
 name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To SHC Lab. No. 71-3039
 Specific Gravity (Sat.) 2.63 (Dry) _____
 Los Angeles Wear 31
 Absorption 1.15 Soundness 0.97
 Wt. Cu. Ft. _____ Str. Ratio 1.56
 Remarks Materials Department No. 18-45



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

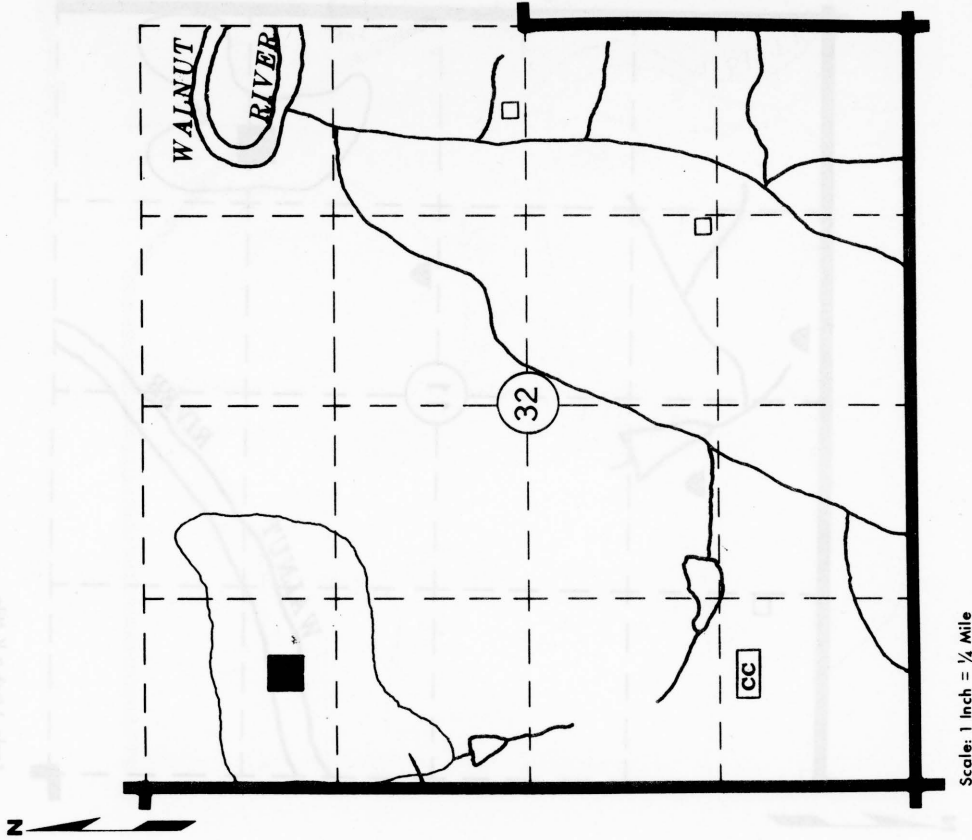
Site No. LS+8 Date Nov. 2, 1977
PWC
 Material Limestone County Cowley
 Location NW 1/4 Sec. 32 Twp. 32S Range 4E
 Owner C. L. Daniels
name
Dry Accessibility Good Site Located on Plate VIII
 Nature of Deposit Open Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Winfield Limestone - Cresswell Limestone MBR.
 Material Similar To SHC Lab. No. 71-1188
 Specific Gravity (Sat.) 2.43 (Dry) 2.28
 Los Angeles Wear 33
 Absorption 6.22 Soundness 0.78
 Wt. Cu. Ft. Str. Ratio
 Remarks Materials Department Site No. 18-46



MATERIAL SITE DATA FORM

Site No. LS+9 Date Nov. 2, 1977
Pb
 Material Limestone County Cowley
 Location E 1/2, SE 1/4 Sec. 11 Twp. 33S Range 4E
 Owner H. J. Born Box 53, Silverdale, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Sampled

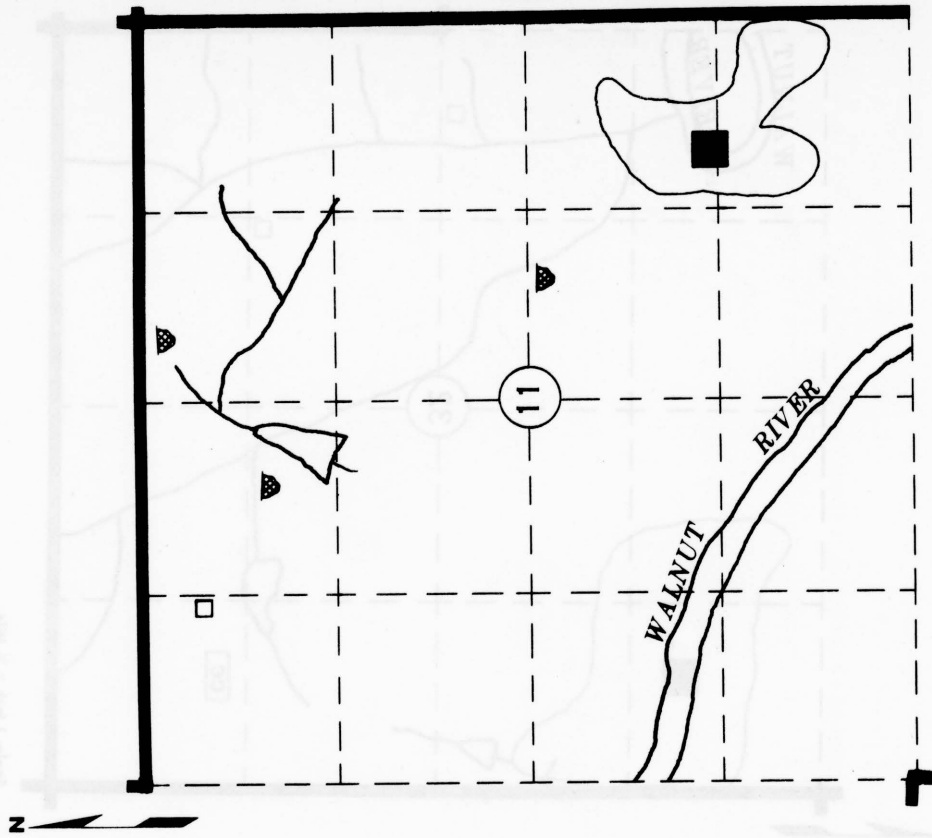
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Barneston Formation - Fort Riley Limestone Member
 Material Similar To SHC Lab No. 81614

Specific Gravity (Sat) 2.19 (Dry) _____
 Los Angeles Wear 50.0
 Absorption 11.36 Soundness 0.84
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department Site No. 18-39



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. CG+10 Date Nov. 2, 1977
Qtw
 Material Gravel (Chert & Limestone) County Cowley
 Location NE 1/4, SE 1/4 Sec. 23 Twp. 33S Range 4E
 Owner Howard G. Birdzell, etux R. #3, Winfield, Kansas 67156
 name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Sampled

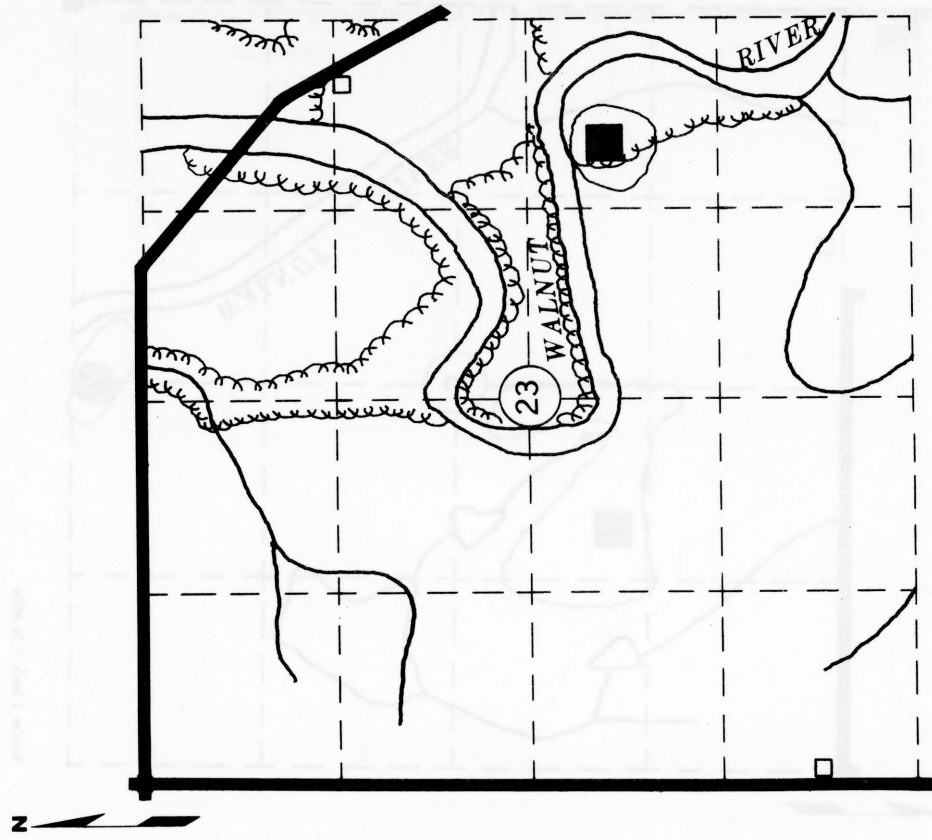
EXPLORATION DATA

Test Hole	Material Bottom of Hole	Depth of Overburden	Depth of Material	Wash							P.I.				
				1 1/2	3/8	4	8	16	30	50		100	200		

CORRELATION DATA

Geological Age Quaternary
 Geological Source Wisconsinan Terrace
 Material Similar To SHC No. 81630

Specific Gravity (Sat.) 2.51 (Dry) _____
 Los Angeles Wear 23.2
 Absorption _____ Soundness 0.99
 Wt. Cu. Ft. 120.1 Str. Ratio 1.74
 Remarks Materials Department No. 18-37



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

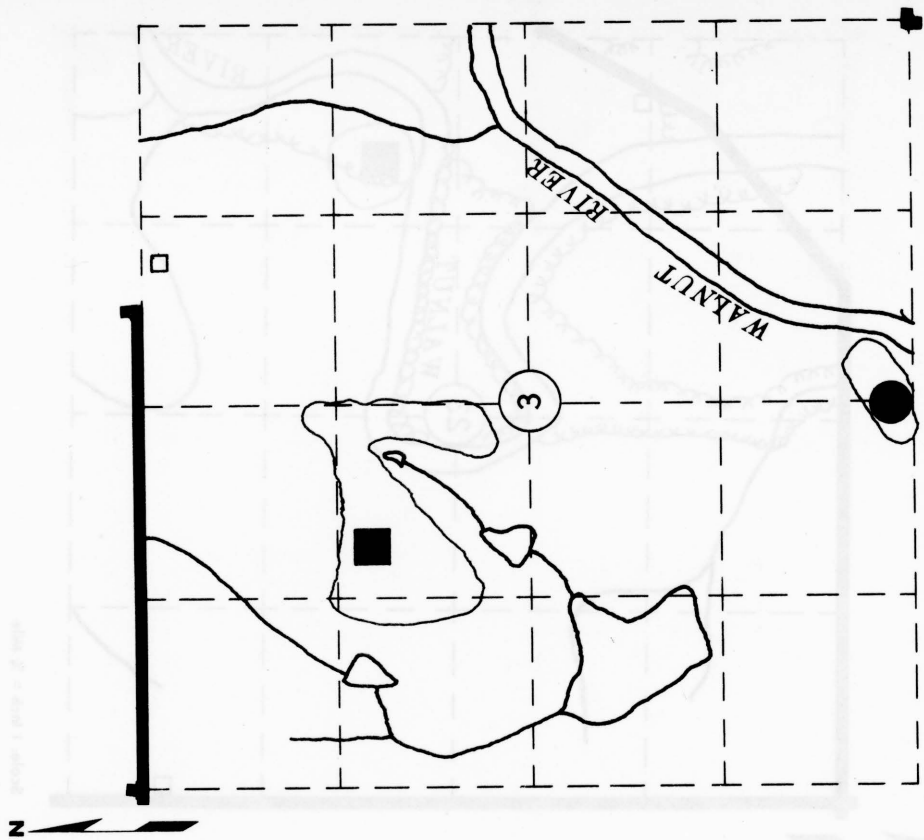
Site No. LS+11 Date Nov. 2, 1977
PWC
 Material Limestone County Cowley
 Location SE 1/4, NE 1/4 Sec. 3 Twp. 34S Range 4E
 Owner Robert W. Dowler R. 3, Winfield, Kansas 67156
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; sampled

EXPLORATION DATA

Test Hole	Material Bottom of Hole	Depth of Overburden	Depth of Material						Wash	G.F.	L.L.	P.I.
			1/2	3/8	4	8	16	30				

CORRELATION DATA

Geological Age Permian
 Geological Source Winfield Limestone - Cresswell Limestone MBR.
 Material Similar To SHC Lab No. 75-268
 Specific Gravity (Sat.) 2.41 (Dry) 2.29
 Los Angeles Wear 34
 Absorption 5.1 Soundness 0.90
 Wt. Cu. Ft. Str. Ratio
 Remarks Materials Department Site No. 18-49



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

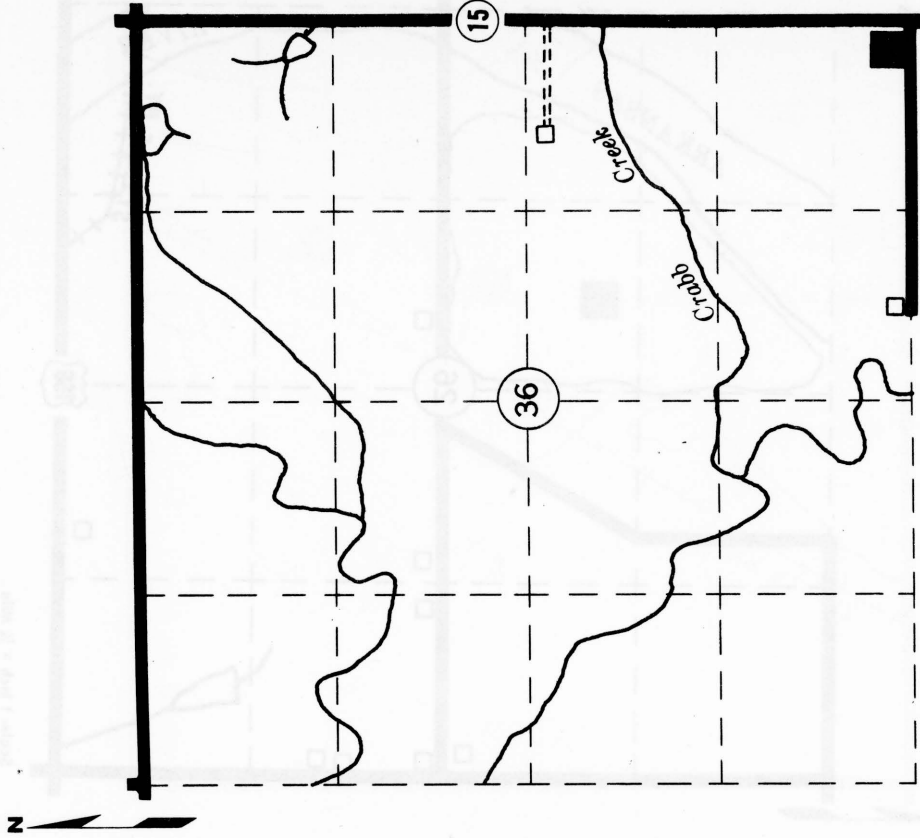
Site No. LS+12 Date Nov. 2, 1977
PW
 Material Limestone County Cowley
 Location SE 1/4, SE 1/4 Sec. 36 Twp. 33S Range 6E
 Owner Charles R. Brazle Dexter, Kansas 67038
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Wreford Limestone Fm - Three mile Ls. MBR.
 Material Similar To SHC No. 81623
 Specific Gravity (Sat.) 2.51 (Dry) _____
 Los Angeles Wear 21.4
 Absorption 2.78 Soundness 0.95
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department No. 18-10



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

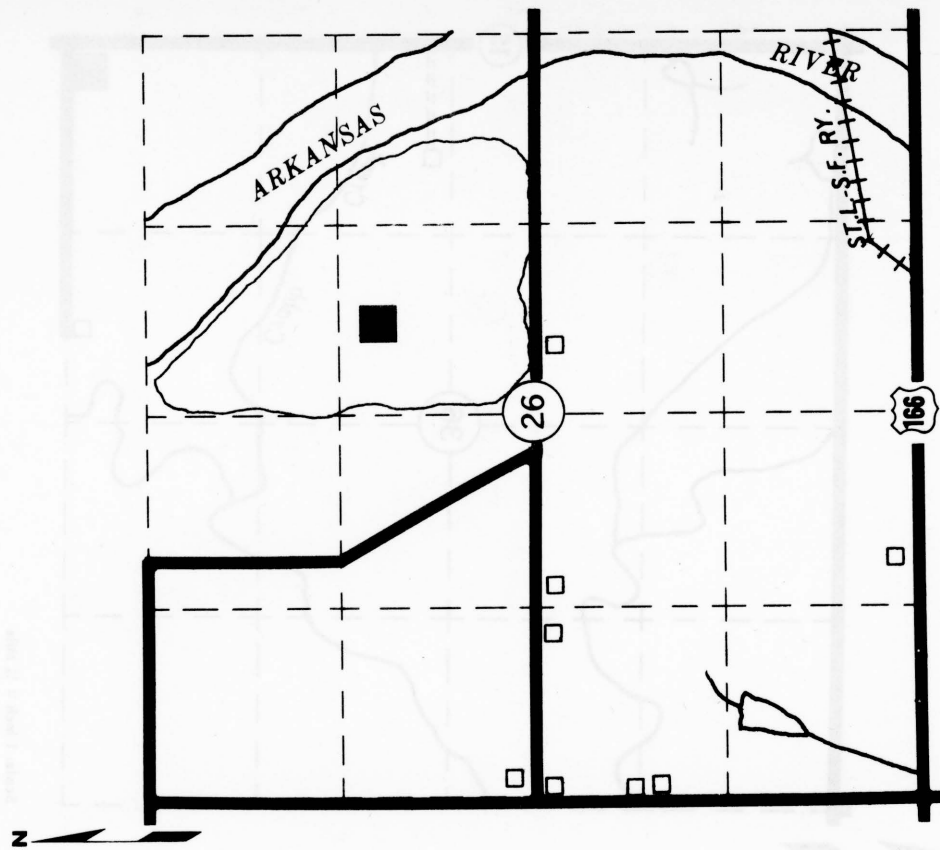
Site No. SG+13 Date Nov. 2, 1977
Qal
 Material Sand & Gravel County Cowley
 Location W 1/2, NE 1/4 Sec. 26 Twp. 34S Range 3E
 Owner Andrews Sand & Gravel Inc. 728 S. 8th, Arkansas City, Kansas
 Nature of Deposit Wet Accessibility Good Site Located on Plate X
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To SHC Lab No. 21808
 Specific Gravity (Sat) 2.62 (Dry)
 Los Angeles Wear _____
 Absorption 0.7 Soundness _____
 Wt. Cu. Ft. 115.94 Str. Ratio 1.21
 Remarks Materials Department No. 18-41



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

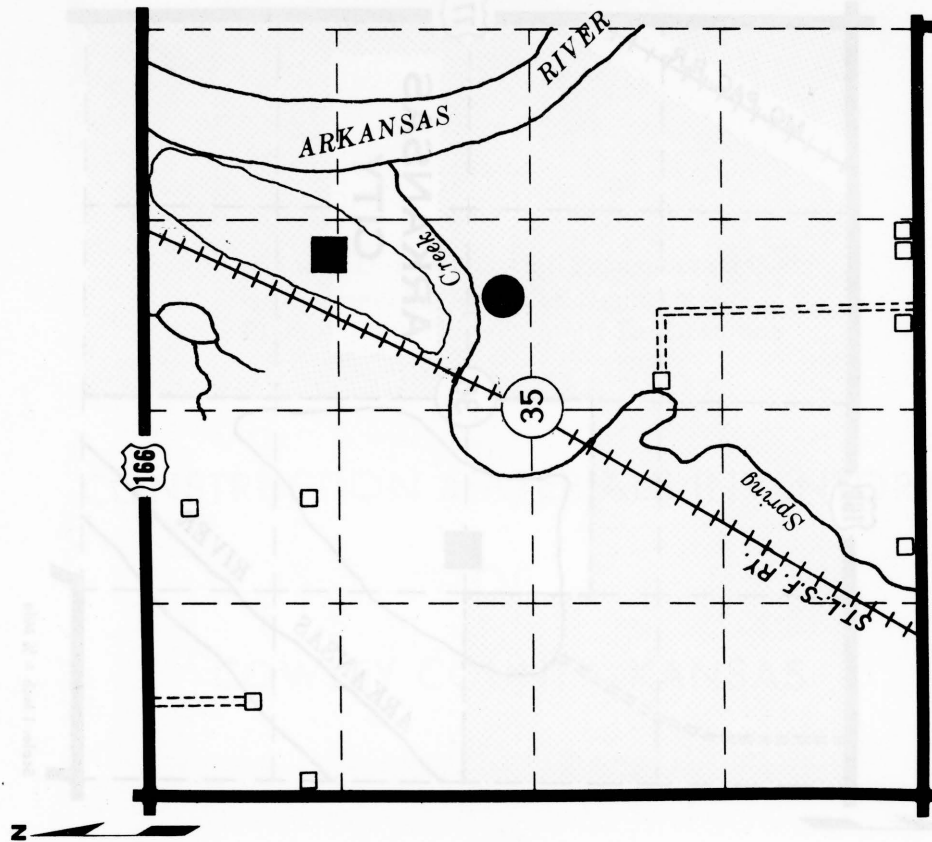
Site No. SG+14 Date Nov. 2, 1977
Qal
 Material Sand & Gravel County Cowley
 Location NE ¼ Sec. 35 Twp. 34S Range 3E
 Owner Andrews Sand & Gravel Inc., 728 S. 8th, Arkansas City, Kansas 67005
 name address
 Nature of Deposit Wet Accessibility Good Site located on Plate X
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To SHC Lab. No. 72-1178
 Specific Gravity (Sat.) 2.57 (Dry)
 Los Angeles Wear 33
 Absorption .30 Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio 1.66
 Remarks Materials Department Site No. 18-47



MATERIAL SITE DATA FORM

Site No. SG+15 Date Nov. 2, 1977
Qal
 Material Sand & Gravel County Cowley
 Location NW 1/4, SW 1/4 Sec. 36 Twp. 34S Range 3E
 Owner Geo. Myers Box 911, Eldorado, Kansas
 name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate X
 Status of Site Open Materials Site; Sampled

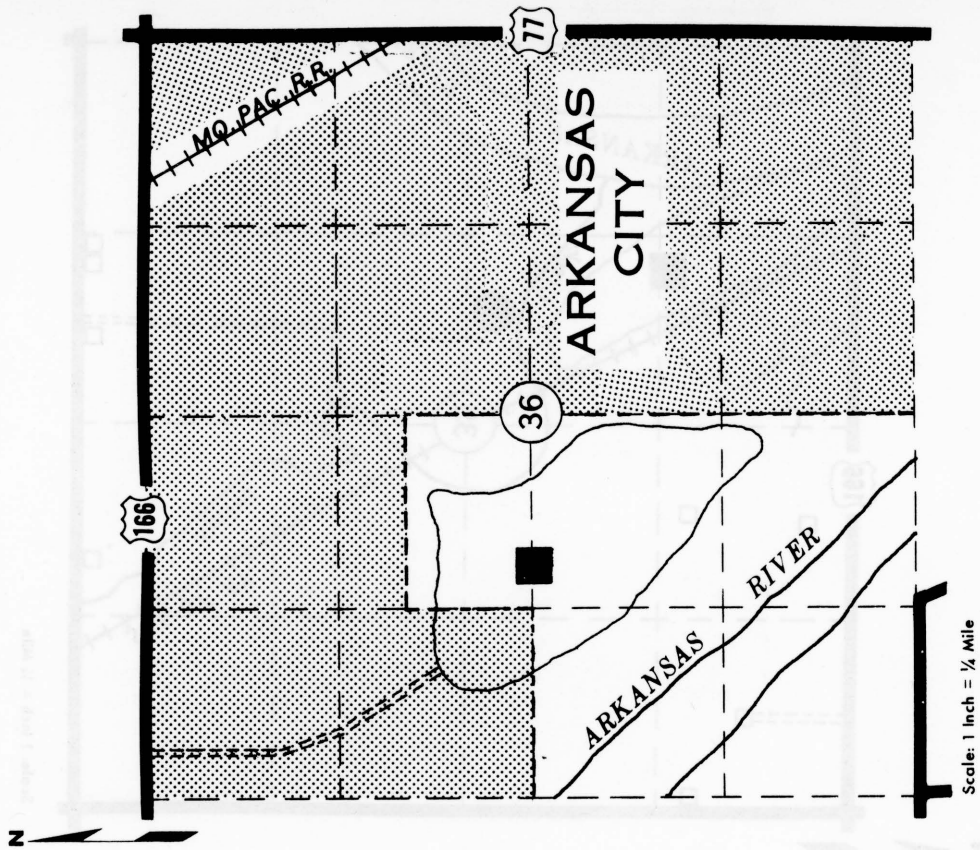
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar to SHC No. 9992

Specific Gravity (Sat) 2.62 (Dry) _____
 Los Angeles Wear 30.1
 Absorption 0.60 Soundness 0.98
 Wt. Cu. Ft. 116.3 Str. Ratio 1.42
 Remarks _____



MATERIAL SITE DATA FORM

Site No. CG+16 Date Nov. 2, 1977
Qtw
 Material Chert Gravel County Cowley
 Location NE 1/4, NW 1/4 Sec. 17 Twp. 34S Range 4E
 Owner Beulah McFarland R.R. 2, Arkansas City, Kansas 67005
name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate X
 Status of Site Open Materials Site; Sampled

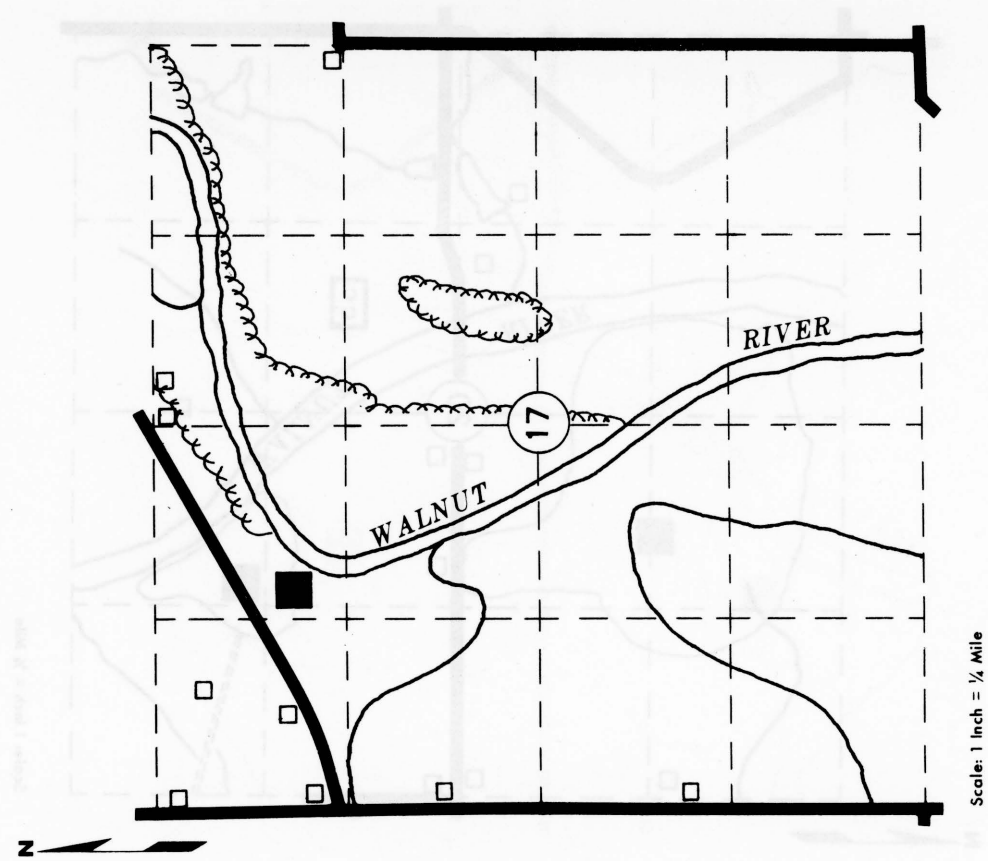
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Wisconsinan Terrace
 Material Similar To SHC Lab No. 21810

Specific Gravity (Sat.) 2.45 (Dry) 2.46
 Los Angeles Wear 20.6
 Absorption 3.92 Soundness 0.98
 Wt. Cu. Ft. 114.05 Str. Ratio 1.23
 Remarks Materials Department No. 18-44



MATERIAL SITE DATA FORM

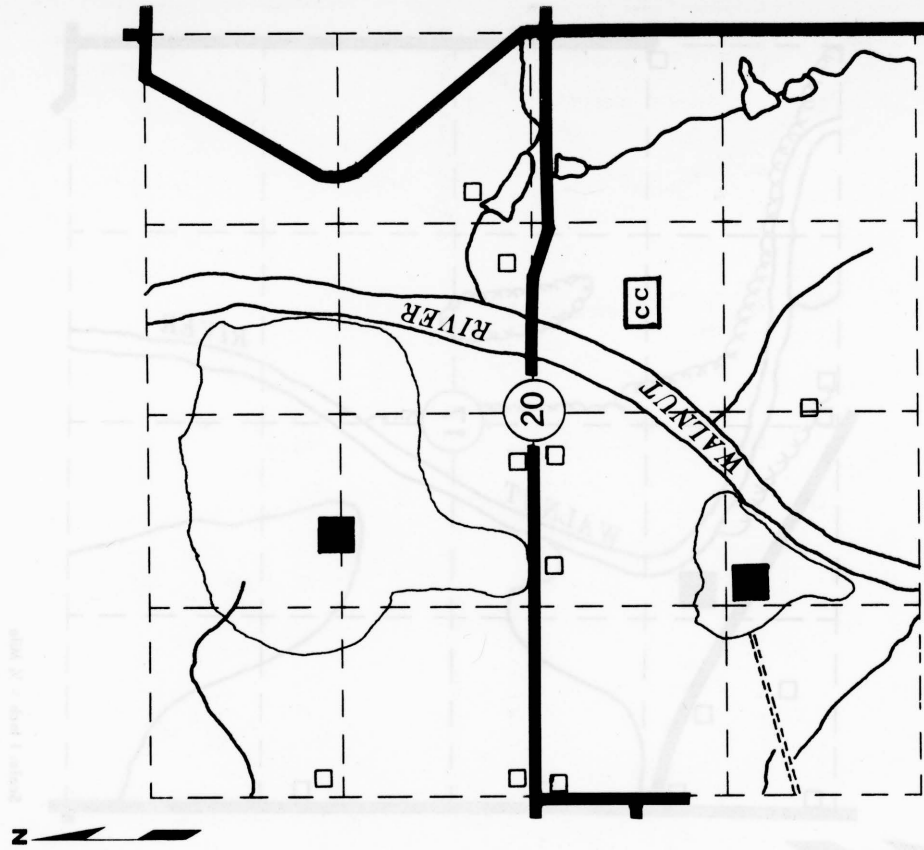
Site No. CG+17 Date Nov. 2, 1977
Qtw
 Material Chert Gravel County Cowley
 Location NW ¼ Sec. 20 Twp. 34S Range 4E
 Owner Gilbert Eddie R#2 Arkansas City, Kansas
 name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate X
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material Bottom of Hole	Depth of Overburden	Depth of Material	Wash					P.I.											
				1½	¾	3/8	4	8		16	30	50	100	200						

CORRELATION DATA

Geological Age Quaternary
 Geological Source Wisconsinan Terrace
 Material Similar To SHC Lab No. 21365
 Specific Gravity (Sat.) 2.55 (Dry)
 Los Angeles Wear 20.7
 Absorption 1.79 Soundness 0.99
 Wt. Cu. Ft. 102.52 Str. Ratio 1.39
 Remarks Materials Department Site No. 18-43



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

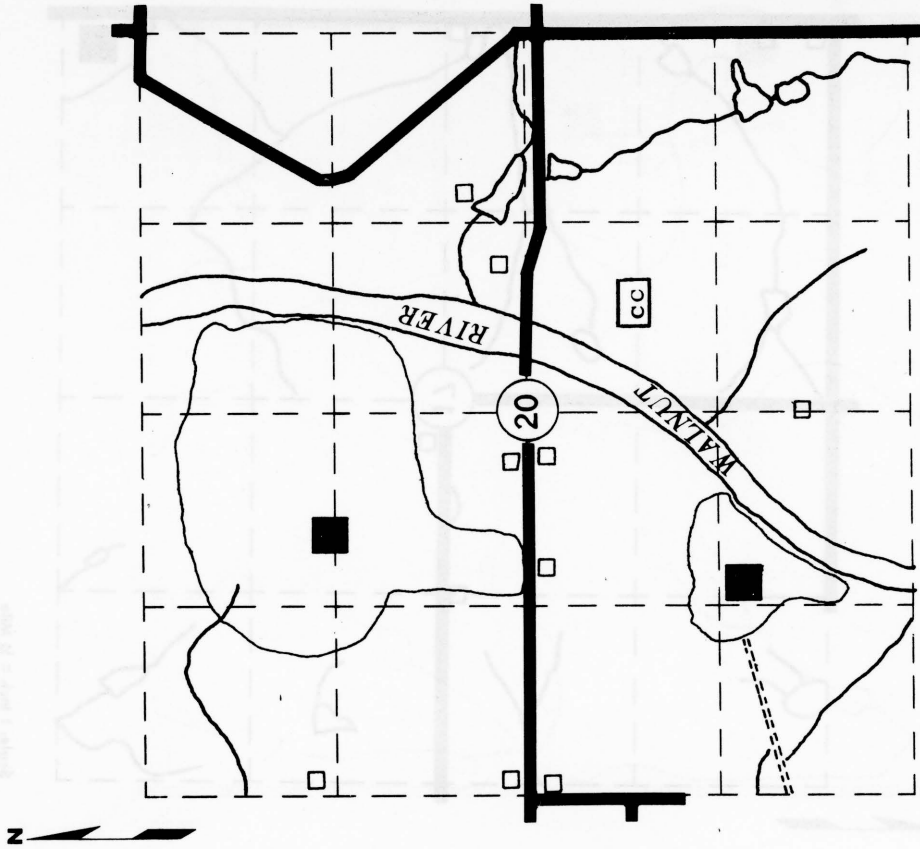
Site No. CG+18 Date Nov. 2, 1977
Qtw
 Material Chert Gravel County Cowley
 Location SW 1/4 Sec. 20 Twp. 34S Range 4E
 Owner Hazel Shrope R#2 Arkansas City, Kansas
 name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate X
 Status of Site Open Material Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Wisconsinan Terrace
 Material Similar To SHC Lab No. 74-1578
 Specific Gravity (Sat.) 2.63 (Dry) 2.56
 Los Angeles Wear 22
 Absorption 1.3 Soundness 0.99
 Wt. Cu. Ft. Str. Ratio
 Remarks Materials Department No. 18-48



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

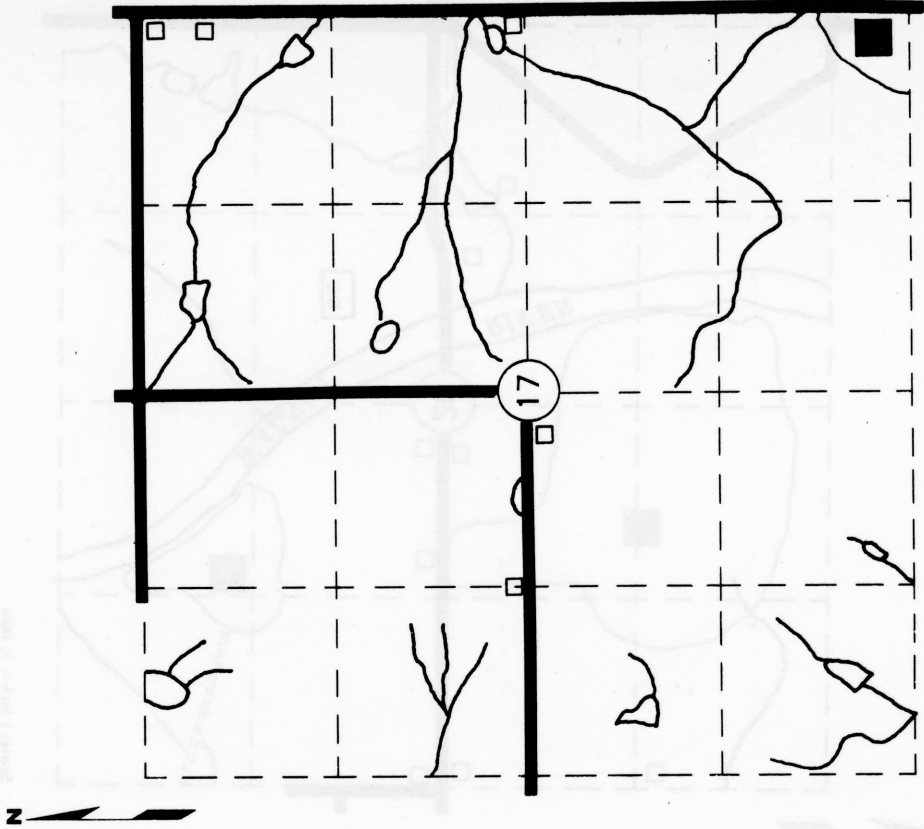
Site No. CG+19 Date Nov. 2, 1977
Qtz
 Material Chert Gravel County Cowley
 Location SE 1/4, SE 1/4 Sec. 17 Twp. 34S Range 5E
 Owner Harry A. Shutley 419 No. C Arkansas City, Kansas 67005
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate XI
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Kansas Terrace
 Material Similar To SHC Lab No. 81631
 Specific Gravity (Sat.) 19.4 (Dry) _____
 Los Angeles Wear _____ Soundness 0.98
 Absorption _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Abandoned



Scale: 1 inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. CG+20 Date Nov. 2, 1977
Qtk
 Material Chert Gravel County Cowley
 Location E½, NE¼ Sec. 20 Twp. 24S Range 5E
 Owner Harry A. Shutler 419 No. "C" Arkansas City, Kansas 67005
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate XI
 Status of Site Open Materials Site; Sampled

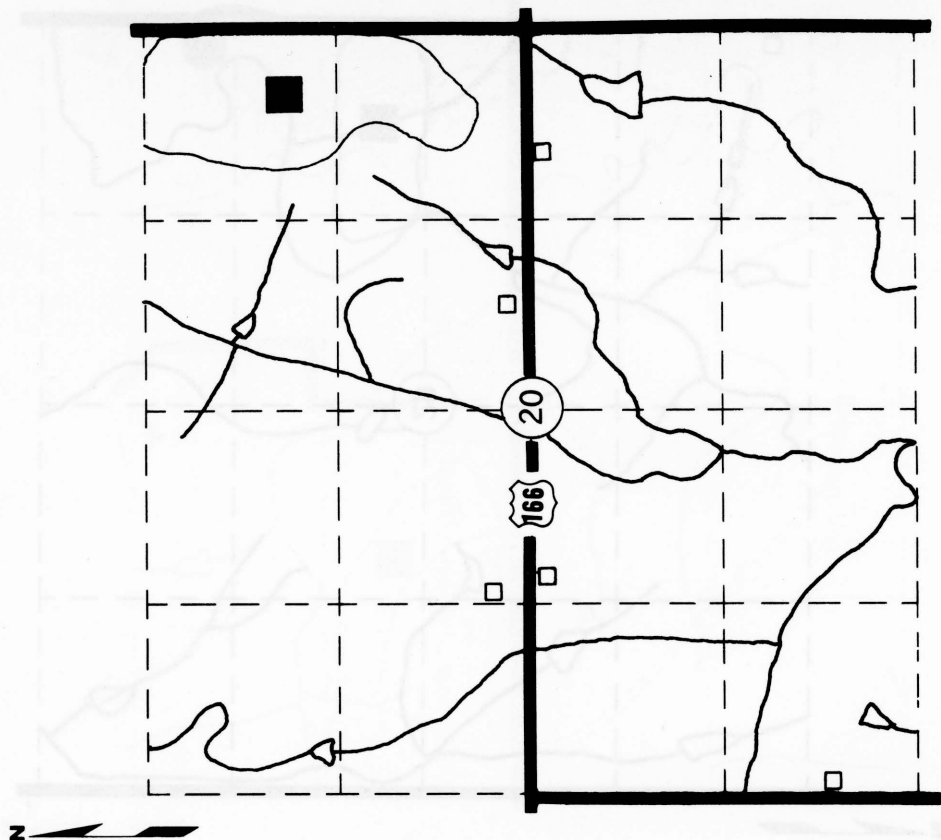
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Kansas Terrace
 Material Similar To SHC Lab No. 81631

Specific Gravity (Sat.) 19.4 (Dry)
 Los Angeles Wear 0.98
 Absorption Soundness
 Wt. Cu. Ft. Str. Ratio
 Remarks Abandoned
Materials Department Site No. 18-5



Scale: 1 inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+21 Date Nov. 2, 1977
Pb
 Material Limestone County Cowley
 Location NE 1/4, SE 1/4 Sec. 29 Twp. 34S Range 5E
 Owner C. H. Hockenbury R. 3, Box 230 Arkansas City, Kansas 67005
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate XI
 Status of Site Open Materials Site; Sampled

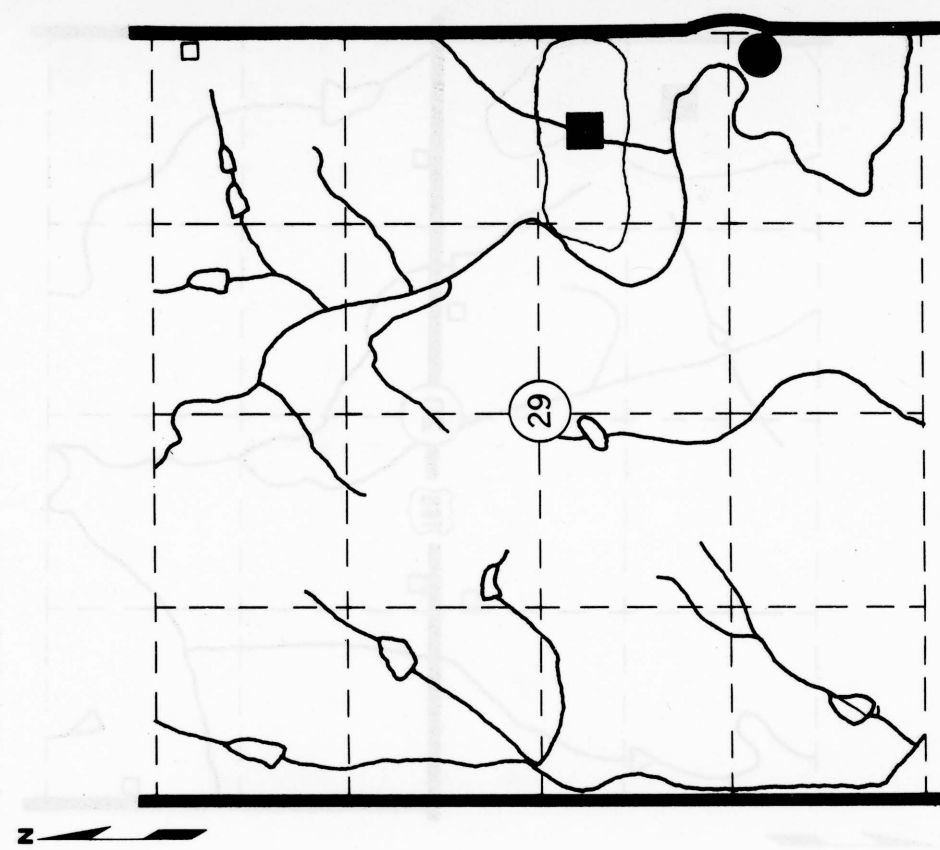
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Barneston Formation - Fort Riley Limestone MBR
 Material Similar To SHC Lab No. 81597

Specific Gravity (Sat.) 2.39 (Dry) _____
 Los Angeles Wear 39.4
 Absorption 6.67 Soundness 0.91
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department Site No. 18-30



MATERIAL SITE DATA FORM

Site No. CG+22 Date Nov. 2, 1977
Qtk
 Material Chert Gravel County Cowley
 Location S 1/2, NW 1/4 Sec. 21 Twp. 34S Range 5E
 Owner Forrest L. Williamson, R#3 Arkansas City, Kansas 67005
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate XI
 Status of Site Open Materials Site; Sampled

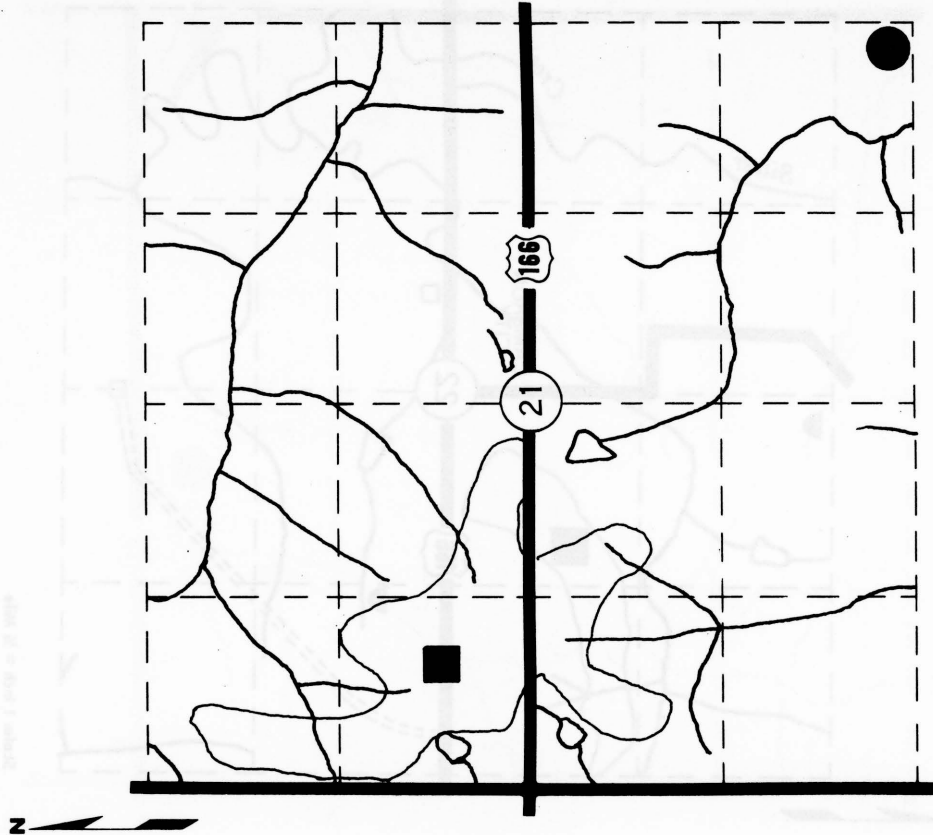
EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Or. Burden	Depth of Material	Wash							P.I.				
				1/2	3/8	4	8	16	30	50		100	200		

CORRELATION DATA

Geological Age Quaternary
 Geological Source Kansan Terrace
 Material Similar To SHC Lab No. 81631

Specific Gravity (Sat.) 19.4 (Dry)
 Los Angeles Wear 0.98 Soundness
 Absorption Str. Ratio
 Wt. Cu. Ft.
 Remarks Abandoned
Materials Department Site No. 18-5



Scale: 1 inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+23 Date Nov. 2, 1977
Pb
 Material Limestone County Cowley
 Location S 1/2, NW 1/4 Sec. 22 Twp. 34S Range 5E
 Owner Beatrice DeVore 201 C Lakeview Vlg., Lenexa, Kansas
 Nature of Deposit Dry Accessibility Good Site Located on Plate XI
 Status of Site Open Materials Site; Sampled

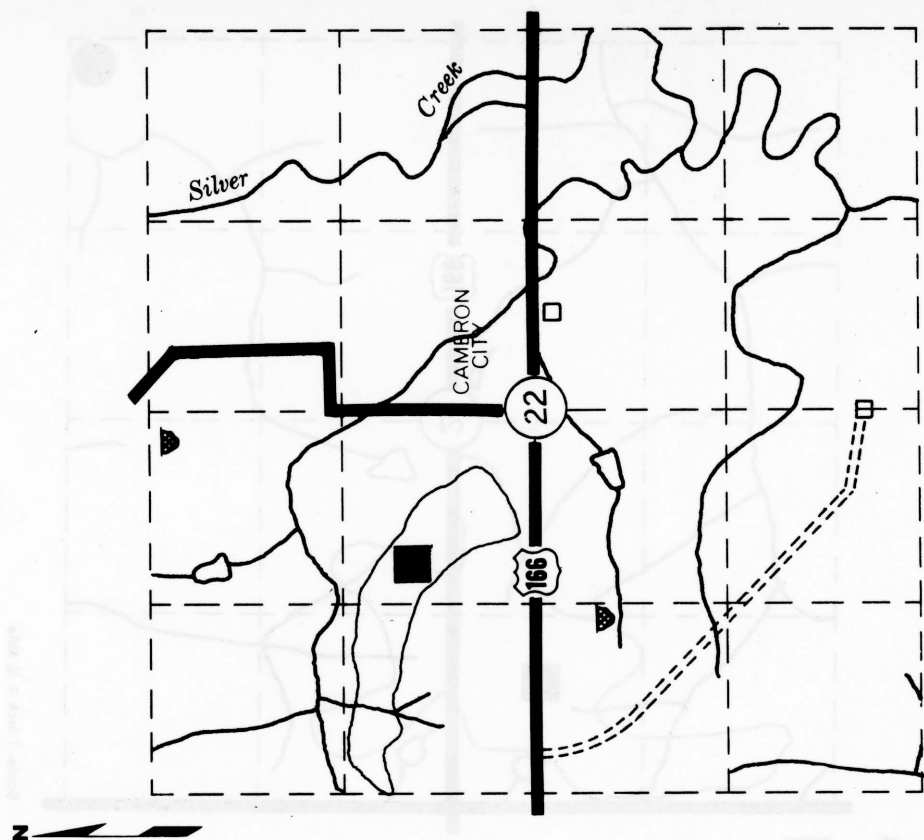
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Barneston Formation - Fort Riley Limestone MBR.
 Material Similar To SHC Lab No. 81587

Specific Gravity (Sat.) 2.38 (Dry) _____
 Los Angeles Wear 39.7
 Absorption 6.56 Soundness 0.93
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Abandoned
Materials Department Site No. 18-29



MATERIAL SITE DATA FORM

Site No. LS+24
Pr Date Nov. 2, 1977
 Material Limestone County Cowley 7 E
E 1/2 12 34 S
W 1/2 7 34 Range 8 E
 Location Sec. Twp. Range
 Owner 1st National Bank Winfield, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate XII
 Status of Site Open Materials Site; Sampled

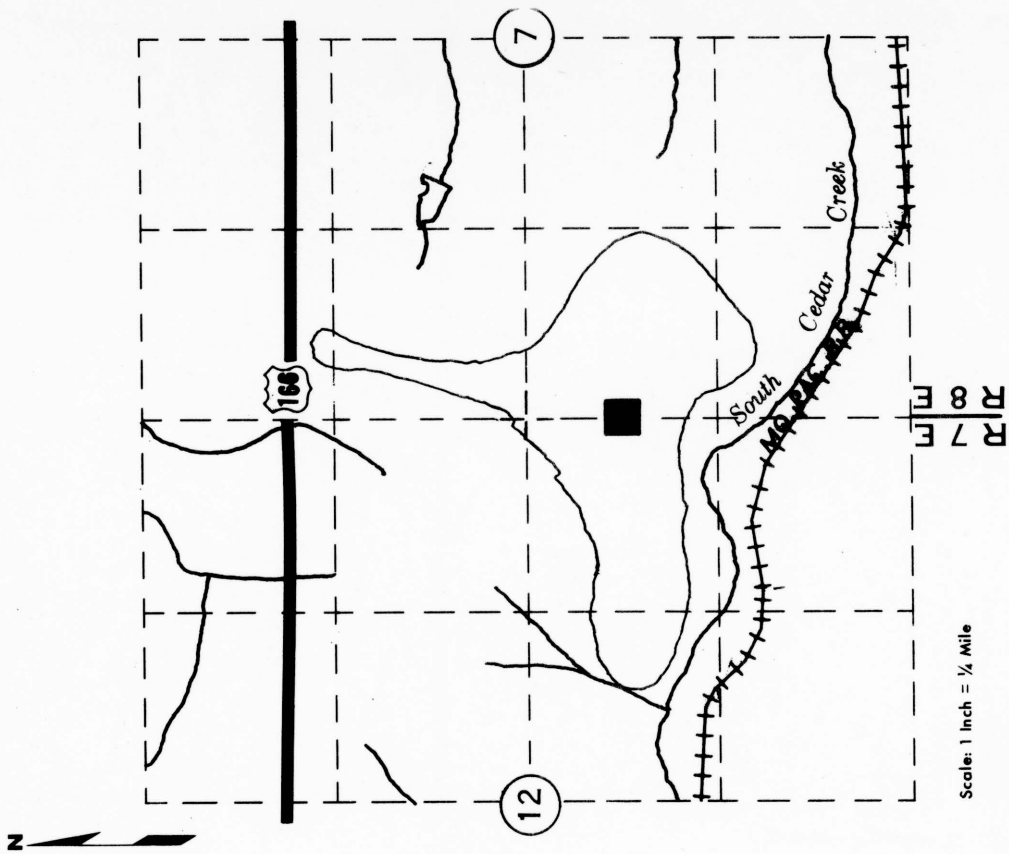
EXPLORATION DATA

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

CORRELATION DATA















Geological Age Permian
 Geological Source Red Eagle Limestone Formation
 Material Similar To SHC Lab No. 81605

Specific Gravity (Sat) 2.46 (Dry) _____
 Los Angeles Wear 38.1
 Absorption 4.44 Soundness 0.93
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department Site No. 18-35



OPEN MATERIALS SITES ; NOT SAMPLED

LEGEND

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

MATERIAL SITE DATA FORM

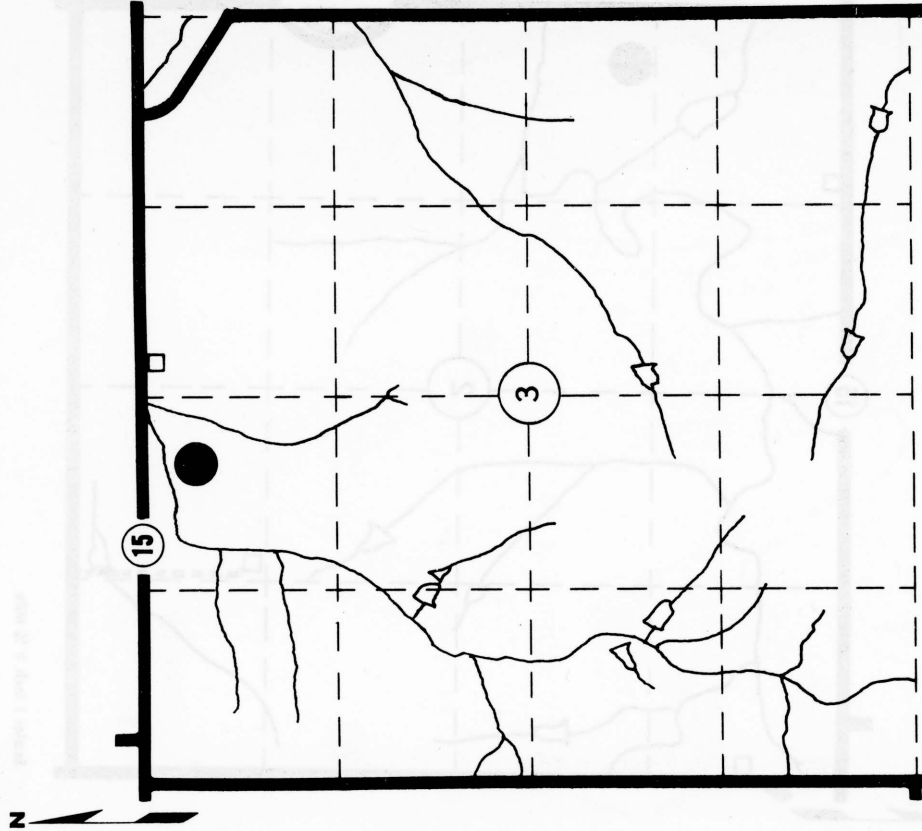
Site No. LS+25 Date Nov. 2, 1977
Pnh
 Material Limestone County Cowley
 Location NE 1/4, NW 1/4 Sec. 3 Twp. 31S Range 3E
 Owner Irene Ferguson address Udall, Kansas 67146
 Nature of Deposit Dry Accessibility Good Site located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Nolans Limestone - Herington Limestone MBR.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1 Inch = 1/2 Mile

MATERIAL SITE DATA FORM

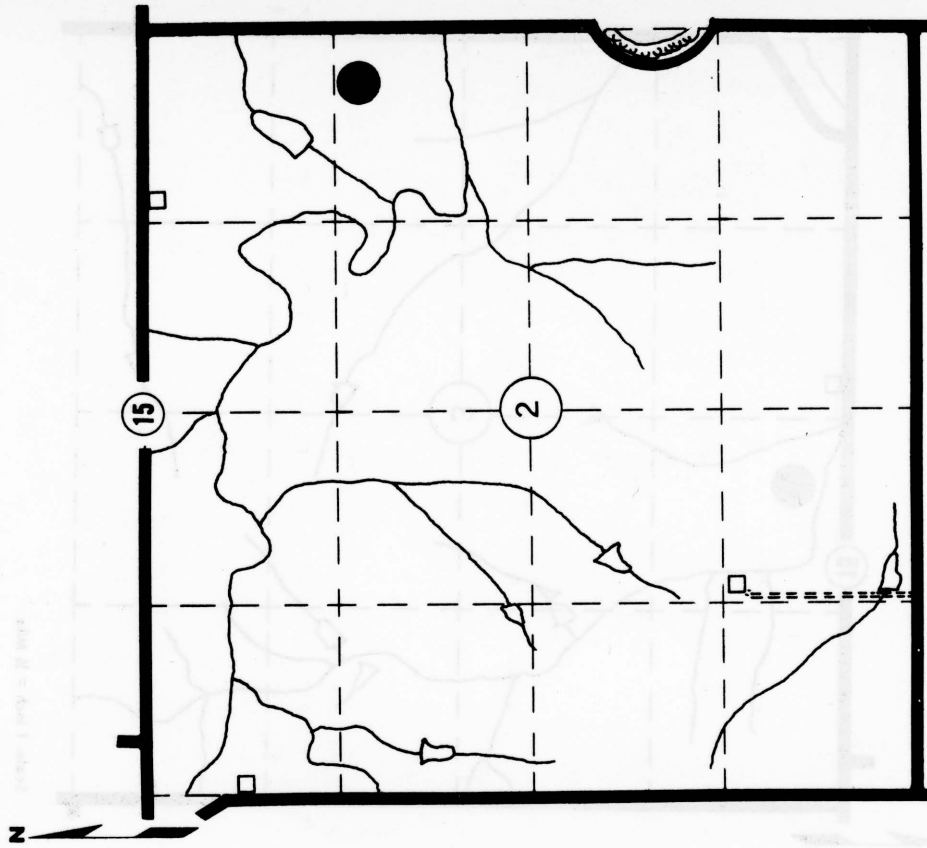
Site No. LS+26 Date Nov. 2, 1977
PWC
 Material Limestone County Cowley
 Location SE 1/4, NE 1/4 Sec. 2 Twp. 31S Range 3E
 Owner John B. Story R. #1 Udall, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Winfield Limestone - Cresswell Limestone MBR.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SITE DATA FORM

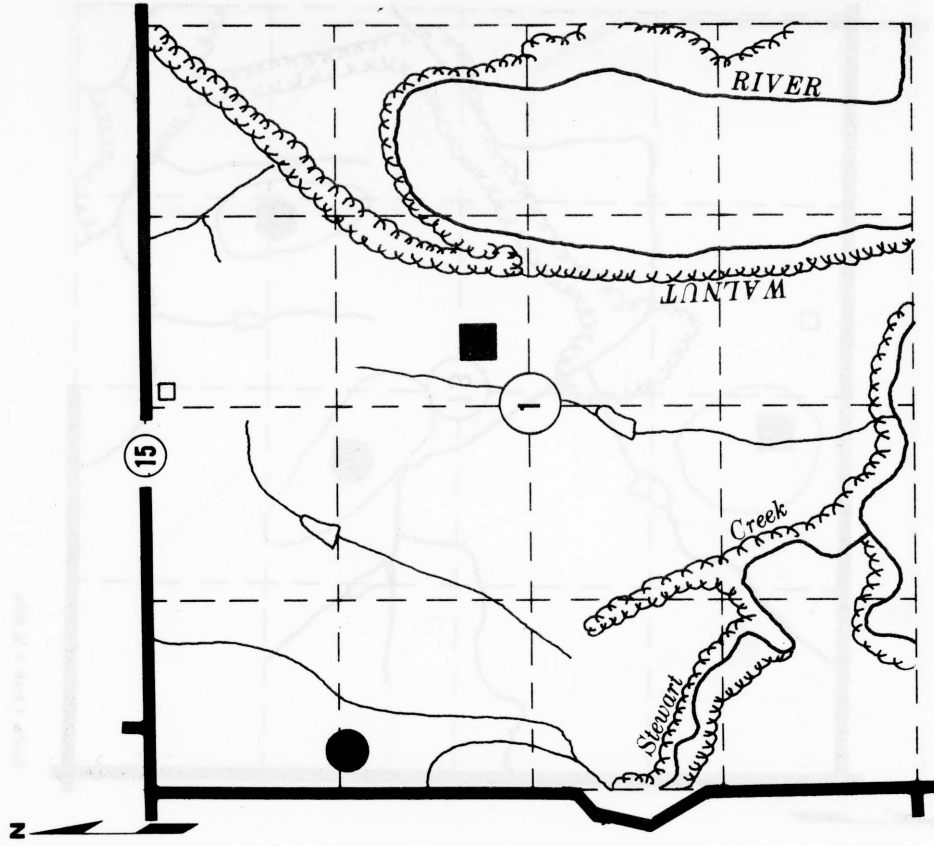
Site No. LS+27 Date Nov. 2, 1977
PWC
 Material Limestone County Cowley
 Location W 1/2, NW 1/4 Sec. 1 Twp. 31S Range 3E
 Owner Joseph K. Brown 2326 Menlo Wichita, Kansas
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Winfield Limestone - Cresswell Limestone MBR.
 Material Similar To _____
 Specific Gravity (Sat) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1 inch = 1/4 Mile

MATERIAL SITE DATA FORM

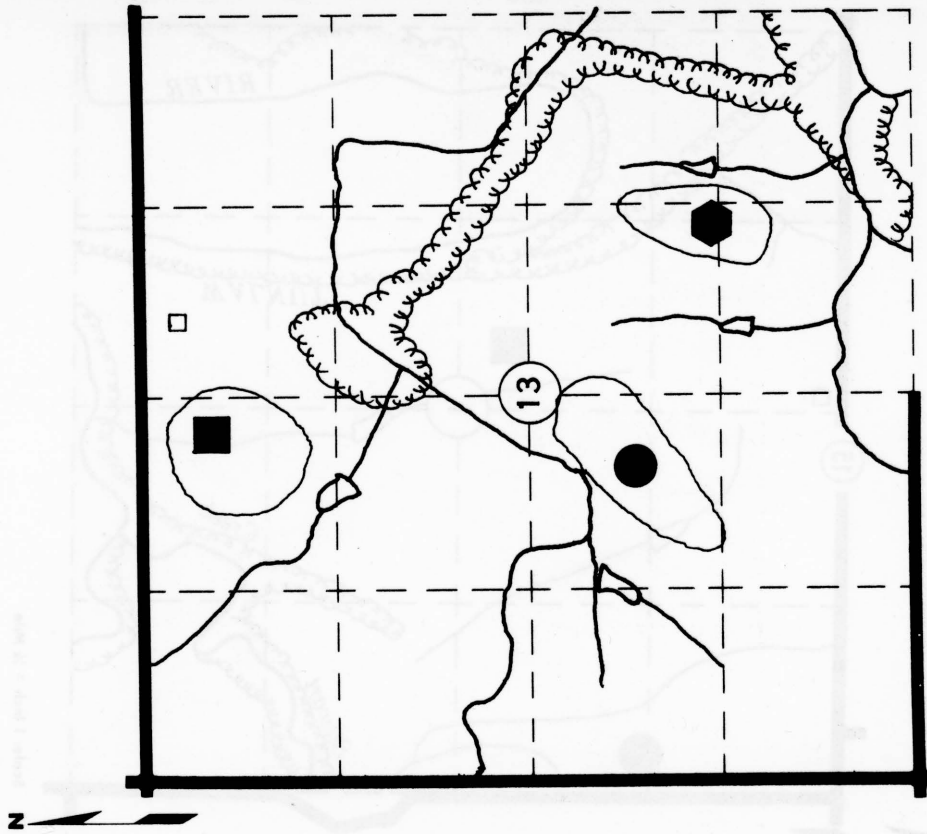
Site No. CG-28 Date Nov. 2, 1977
Qtk
 Material Chert Gravel County Cowley
 Location NE 1/4, SW 1/4 Sec. 13 Twp. 31S Range 3E
 Owner Elbert Olson 904 Shadyway Wichita, Kansas 67203
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

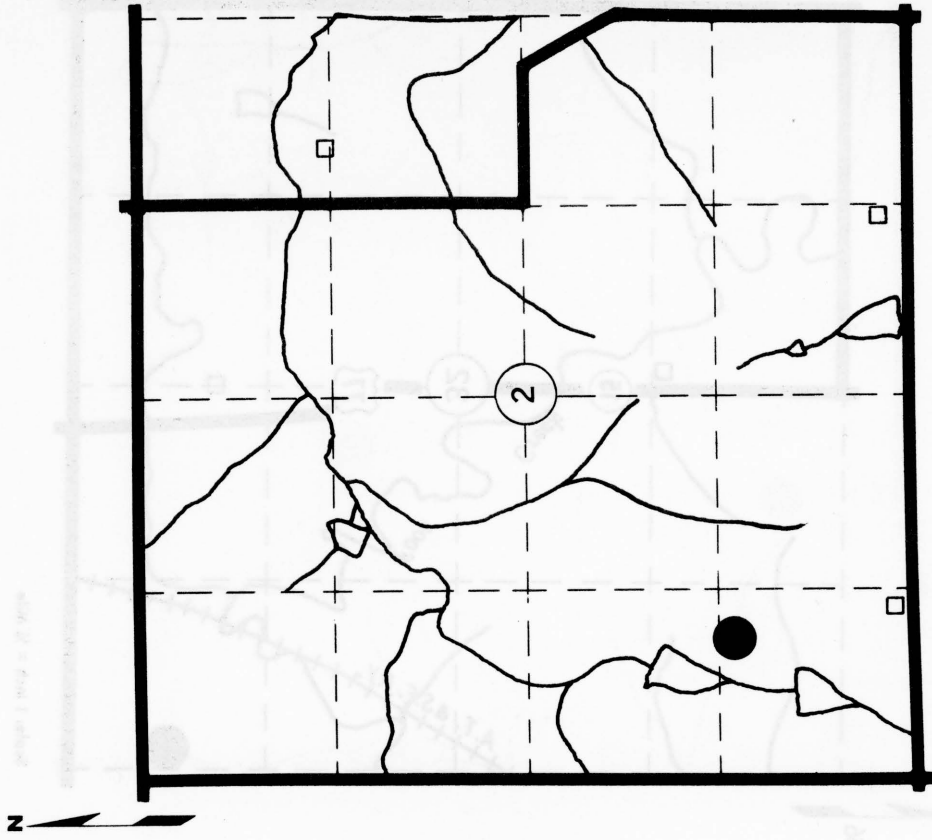
Site No. LS+29 Date Nov. 2, 1977
Pnh
 Material Limestone County Cowley
 Location W 1/2, SW 1/4 Sec. 2 Twp. 32S Range 3E
 Owner Frank L. Ray R# 2 Winfield, Kansas 67156
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Nolans Limestone - Herington Limestone MBR.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

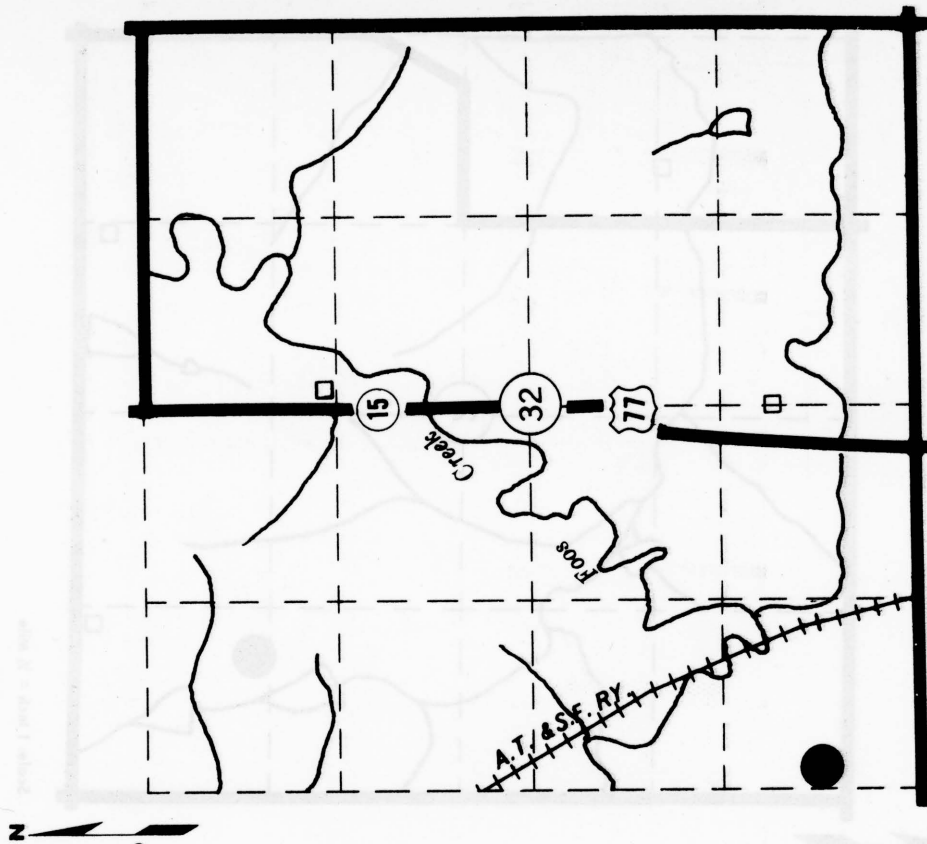
Site No. LS+30 Date Nov. 2, 1977
PWC
 Material Limestone County Cowley
 Location SW 1/4, SW 1/4 Sec. 32 Twp. 31S Range 4E
 Owner Gary L. Andes etal %Donnie Andes R.R. 5 Winfield, Kansas 67156
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Winfield Limestone - Cresswell Limestone MBR.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SITE DATA FORM

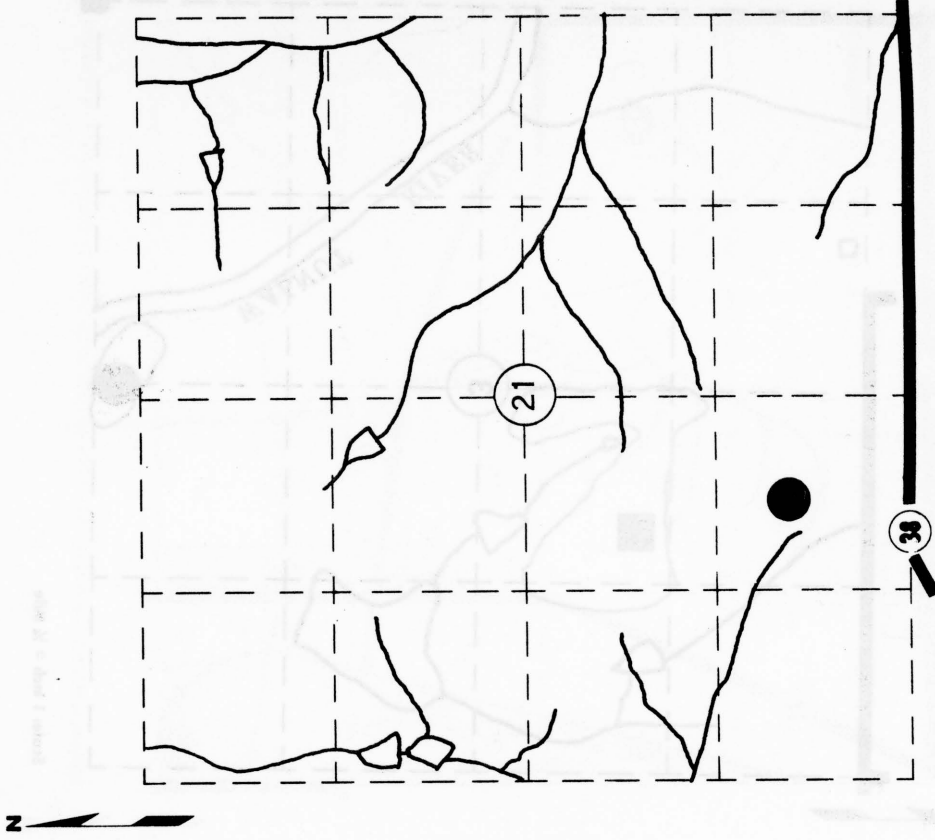
Site No. LS+31 Date Nov. 2, 1977
Pr
 Material Limestone County Cowley
 Location SW ¼ Sec. 21 Twp. 32S Range 8E
 Owner Charles M. Hamil Box 177 Cedar Vale, Kansas 67204
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VI
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Over-Burden	Depth of Material	Wash							P.I.				
				1 ½	¾	3/8	4	8	16	30		50	100	200	

CORRELATION DATA

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



Scale: 1 Inch = ¼ Mile

MATERIAL SITE DATA FORM

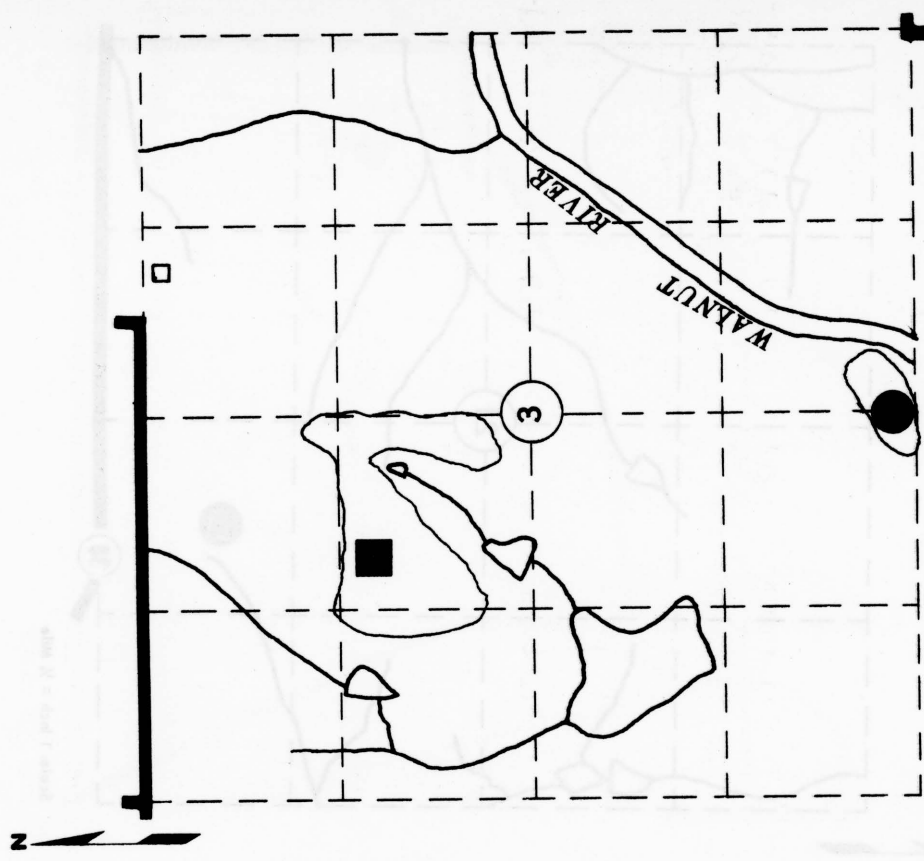
Site No. CG+32 Date Nov. 2, 1977
Qtw
 Material Gravel (Chert & Limestone) County Cowley
 Location SW 1/4 SE 1/4 Sec. 3 Twp. 34S Range 4E
 Owner Robert W. Dowler R#3 Winfield, Kansas 67156
 name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1 inch = 1/4 Mile

MATERIAL SITE DATA FORM

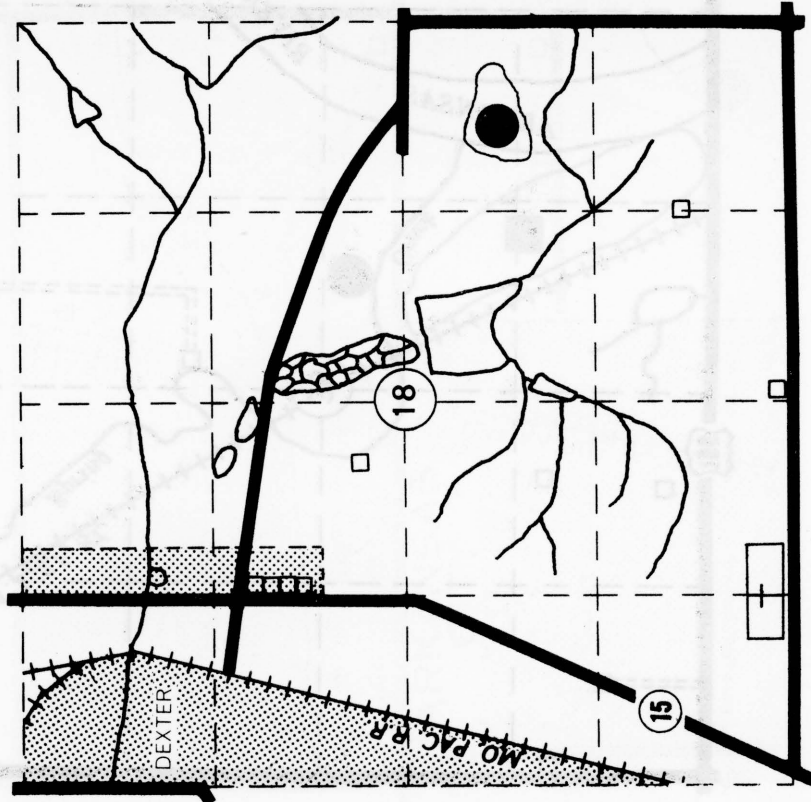
Site No. LS+33 Date Nov. 2, 1977
Pwt County Cowley
 Material Limestone Range 7E
 Location NE 1/4, SE 1/4 Sec. 18 Twp. 33S
 Owner Joint Venture address 909 1st Nat'l Bank Bldg., Wichita, Kansas 67202
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Wreford Limestone - Threemile Limestone MBR.
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

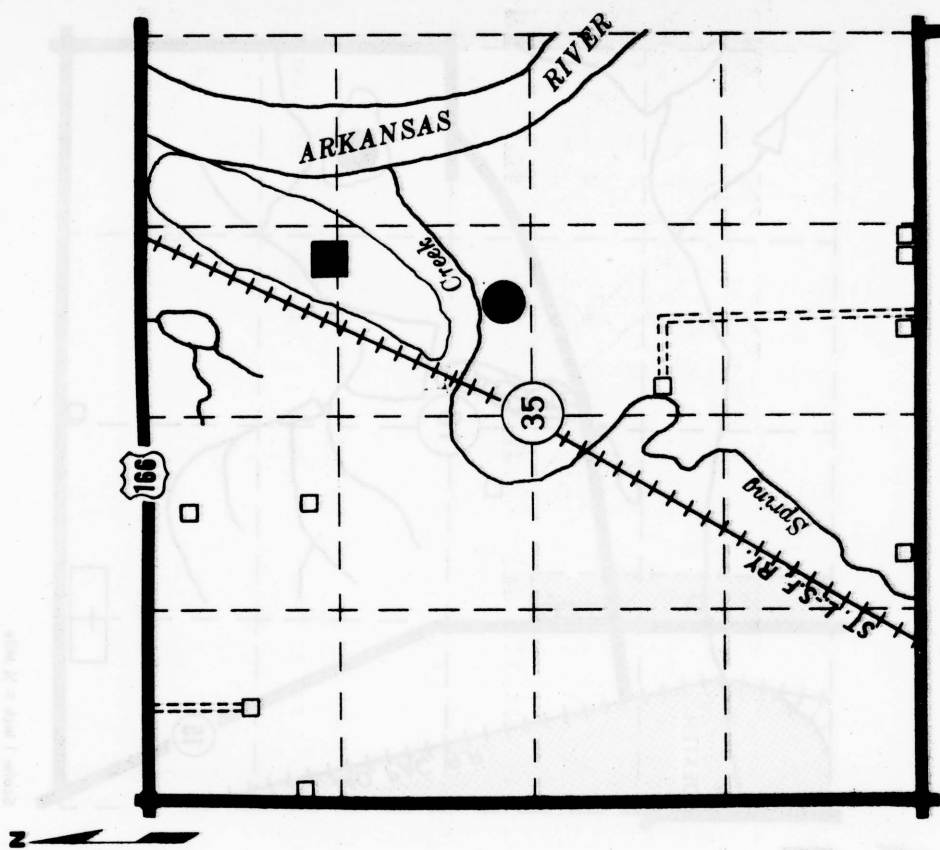
Site No. LS+34 Date Nov. 2, 1977
Pnh
 Material Limestone County Cowley
 Location SW 1/4 NE 1/4 Sec. 35 Twp. 34S Range 3E
 Owner Andrews Sand & Gravel, Inc., 728 S. 8th, Arkansas City, Kansas
 name address 67005
 Nature of Deposit Dry Accessibility Good Site Located on Plate X
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Nolans Limestone - Herington Limestone Member
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SITE DATA FORM

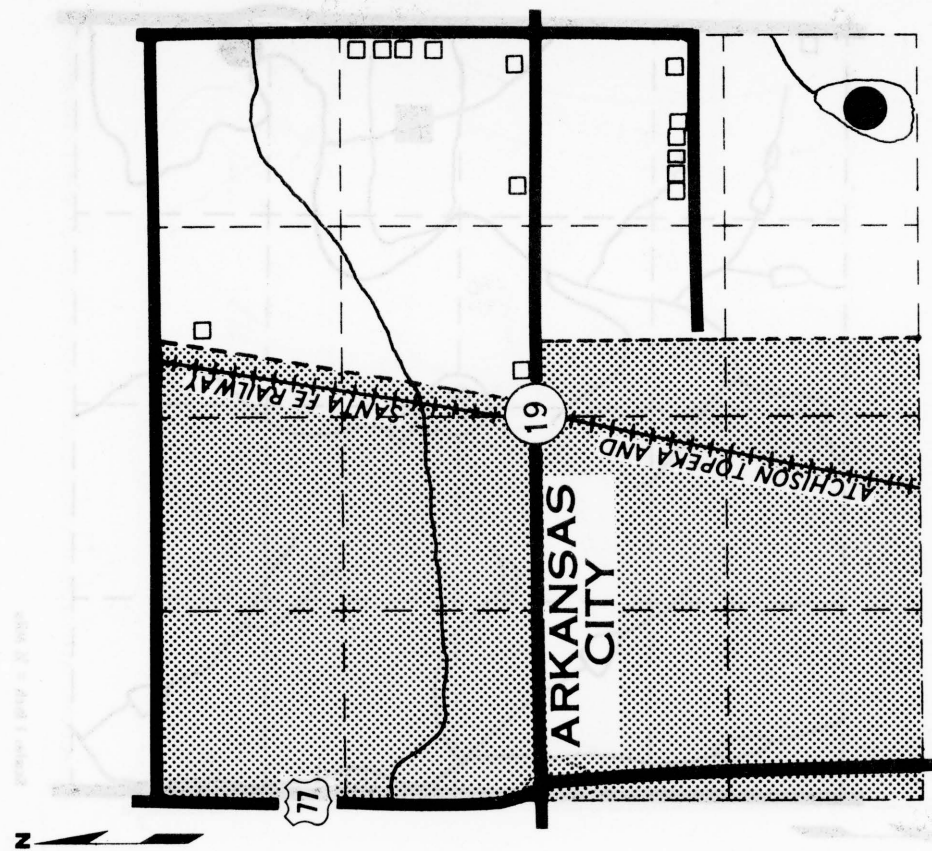
Site No. CG-35 Date Nov. 2, 1977
Qtw
 Material Chert Gravel County Cowley
 Location SE 1/4 Sec. 19 Twp. 34S Range 4E
 Owner Fred W. Rouch etux R # 2 Arkansas City, Kansas
name address
 Nature of Deposit Wet Accessibility Good Site located on Plate X
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material Bottom of Hole	Depth of Overburden	Depth of Material	Wash						P.I.					
				1 1/2	3/4	4	8	16	30		50	100	200		

CORRELATION DATA

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



Scale: 1 inch = 1/4 Mile

MATERIAL SITE DATA FORM

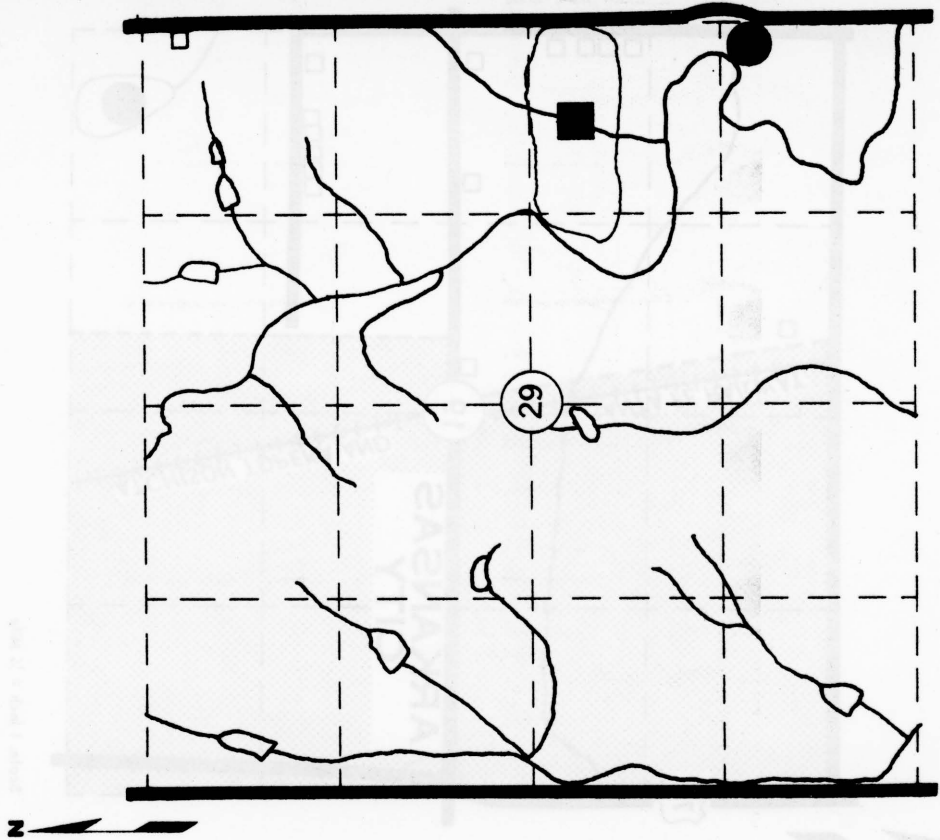
Site No. LS+36 Date Nov. 2, 1977
Pb
 Material Limestone County Cowley
 Location SE 1/4, SE 1/4 Sec. 29 Twp. 34S Range 5E
 Owner C. H. Hockenbury, RR 3, Box 230, Arkansas City, Kansas 67005
 Nature of Deposit Dry Accessibility Good Site Located on Plate XI
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Barneston Formation - Fort Riley Limestone MBR
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

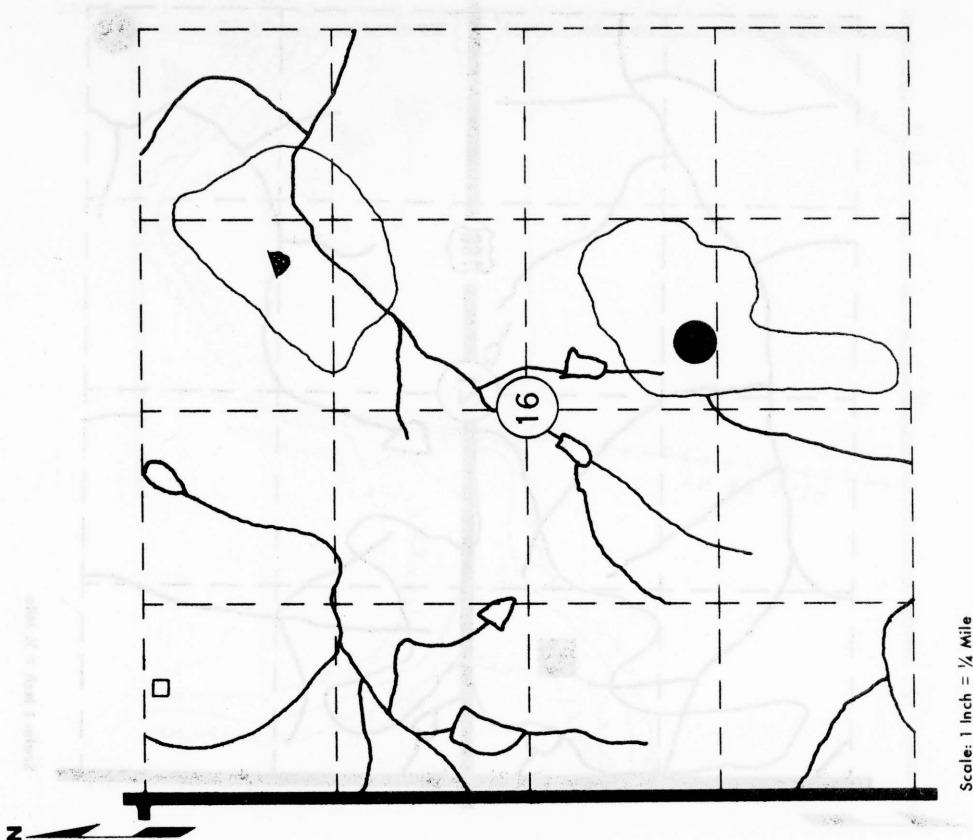
Site No. CG-37 Date Nov. 2, 1977
Otk
 Material Chert Gravel County Cowley
 Location W 1/2, SE 1/4 Sec. 16 Twp. 34S Range 5E
 Owner Richard J. Hunt RR 3, Arkansas City, Kansas 67005
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate XI
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

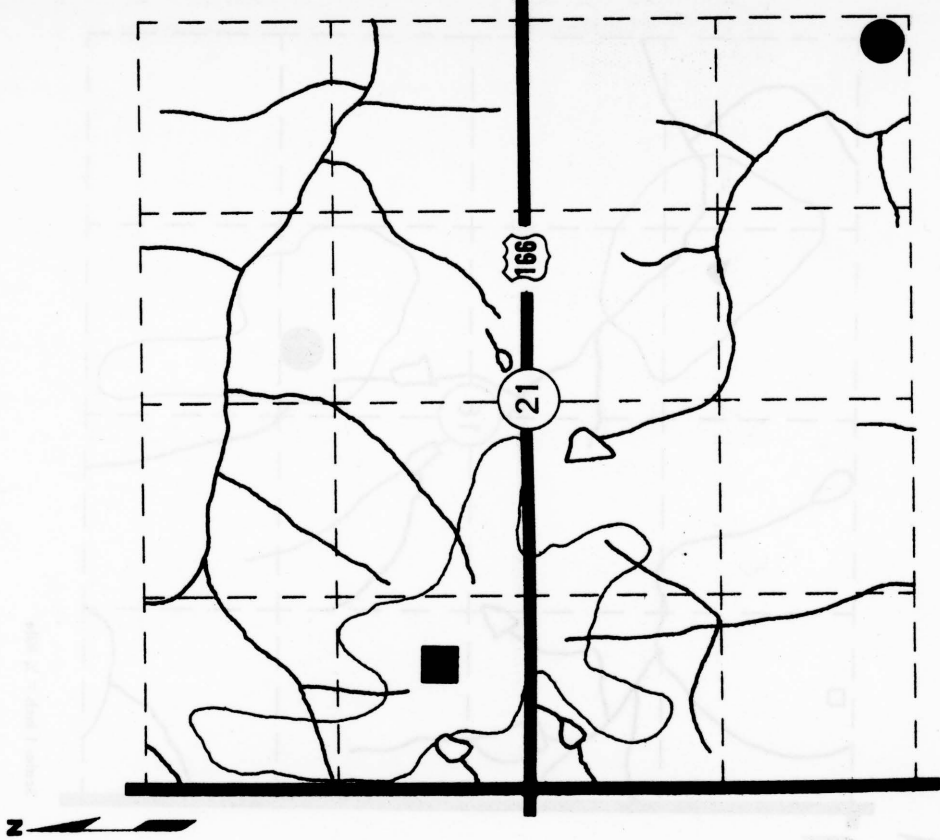
Site No. CG-38 Date Nov. 2, 1977
Qtk
 Material Chert Gravel County Cowley
 Location SE 1/4 Sec. 21E Twp. 34S Range 5E
 Owner Forrest L. Williamson, R#3, Arkansas City, Kansas 67005
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate XI
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1 inch = 1/4 Mile

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	◩	Prospective materials sites; not sampled
~~~~~ Name	Major streams	○ 5	Center of section
~~~~~	Intermittent streams	□	Dwelling
~~~~~	Pond or lake	⊕	Cemetery
		▤	School
		⊕	Church
		▨	Town or city

MATERIAL SITE DATA FORM

Site No. LS+39 Date Nov. 2, 1977
Pb
 Material Limestone County Cowley
 Location NE 1/4 Sec. 32 Twp. 30S Range 4E
 Owner Frances S. Braungardt Rock, Kansas 67131
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Prospective Materials Site; Sampled

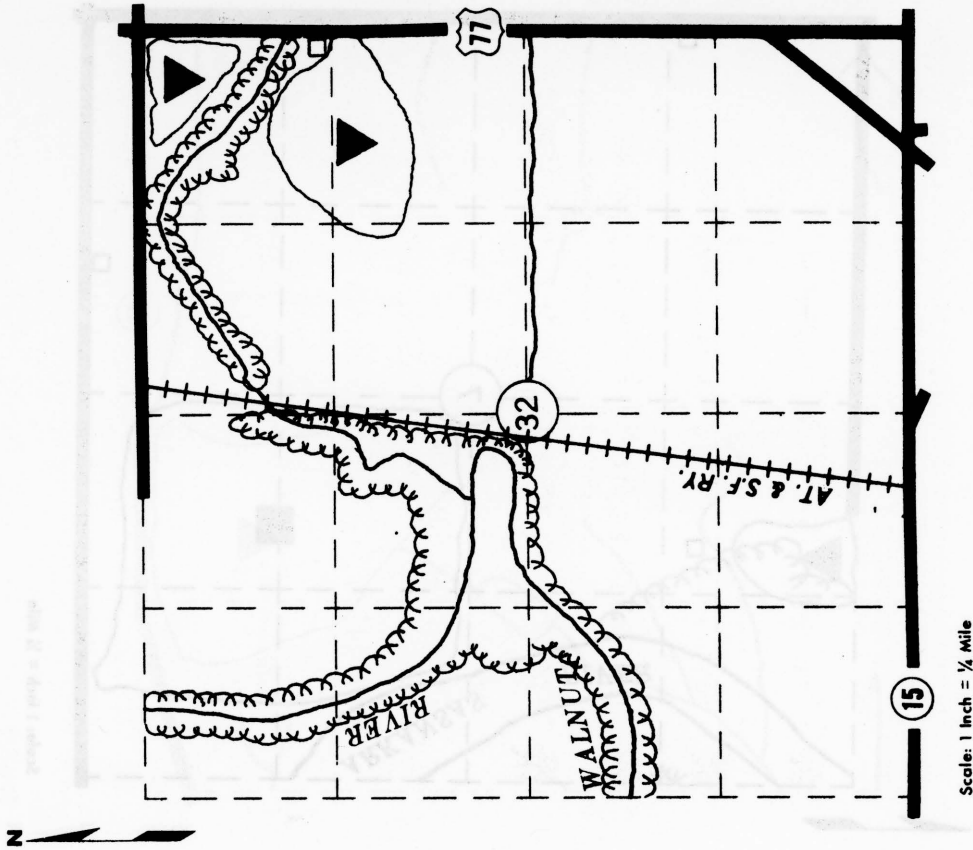
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Barneston Formation - Fort Riley Limestone MBR.
 Material Similar To SHC No. 81608

Specific Gravity (Sat.) 2.31 (Dry) _____
 Los Angeles Wear 39.0
 Absorption 4.94 Soundness 0.95
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department No. 18-24



MATERIAL SITE DATA FORM

Site No. SG+40 Date Nov. 2, 1977
Qal
 Material Sand & Gravel County Cowley
 Location W 1/2, NE 1/4, NW 1/4 Sec. 7 Twp. 32S Range 3E
 Owner Ray Haskins 8425 No. Broadway, Valley Center, Kansas
 name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate IV
 Status of Site Prospective Materials Site; Sampled

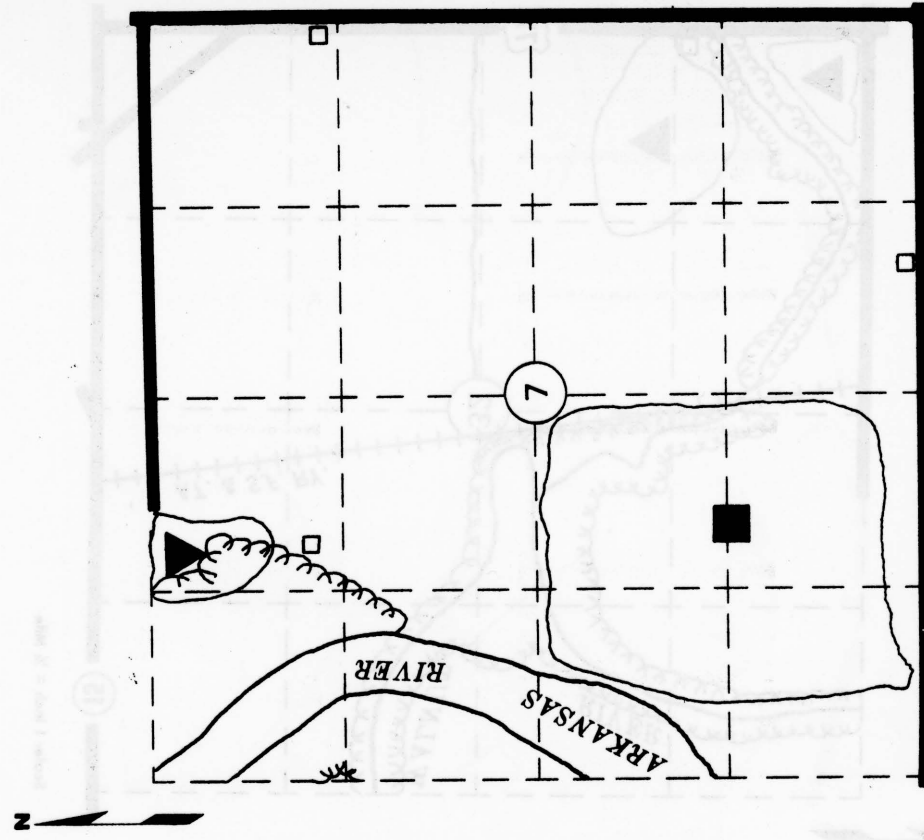
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To SHC Lab No. AB-619

Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department No. 18-8



Scale: 1 Inch = 1/2 Mile

MATERIAL SITE DATA FORM

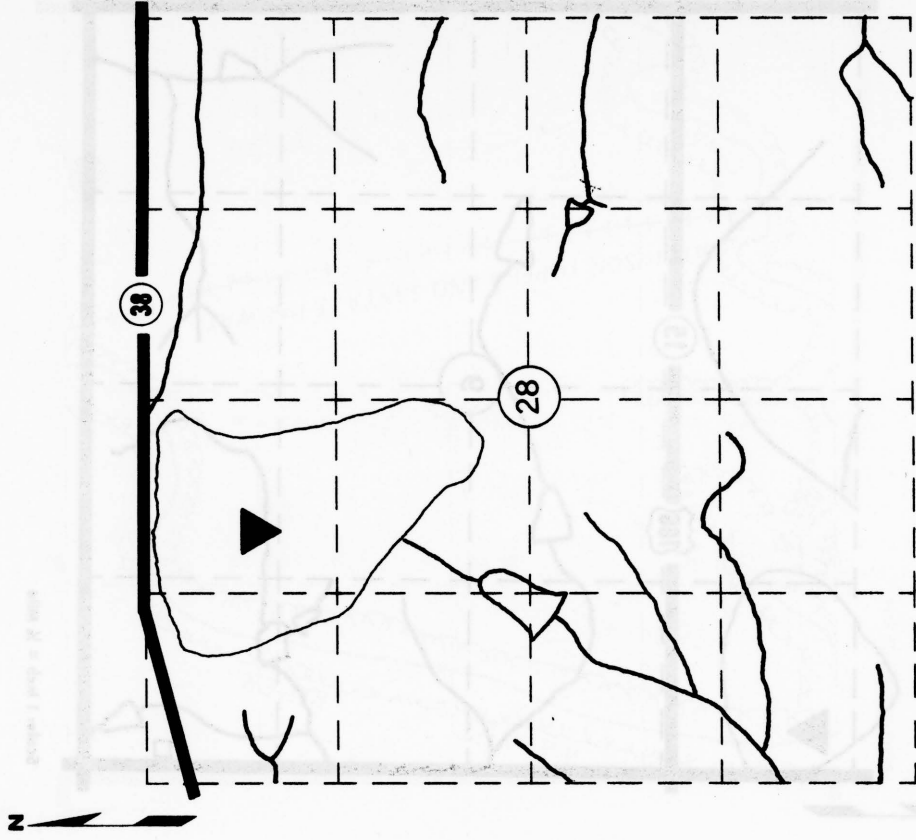
Site No. LS+41 Date Nov. 2, 1977
Pr
 Material Limestone County Cowley
 Location NW 1/4 Sec. 28 Twp. 32S Range 8E
 Owner First Nat'l. Bank Winfield, Kansas 67156
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VI
 Status of Site Prospective Materials Site; Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Red Eagle Limestone Formation
 Material Similar to SHC Lab No. 81602
 Specific Gravity (Sat.) 2.48 (Dry) _____
 Los Angeles Wear 30.7
 Absorption 2.94 Soundness 0.96
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Materials Department No. 18-9



Scale: 1 Inch = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. LS+42 Date Nov. 2, 1977
Pu
 Material Limestone County Cowley
 Location NW 1/4 Sec. 9 Twp. 34S Range 7E
 Owner Carl A. Steward R.R. 1 Cedar Vale, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Prospective Materials Site; Sampled

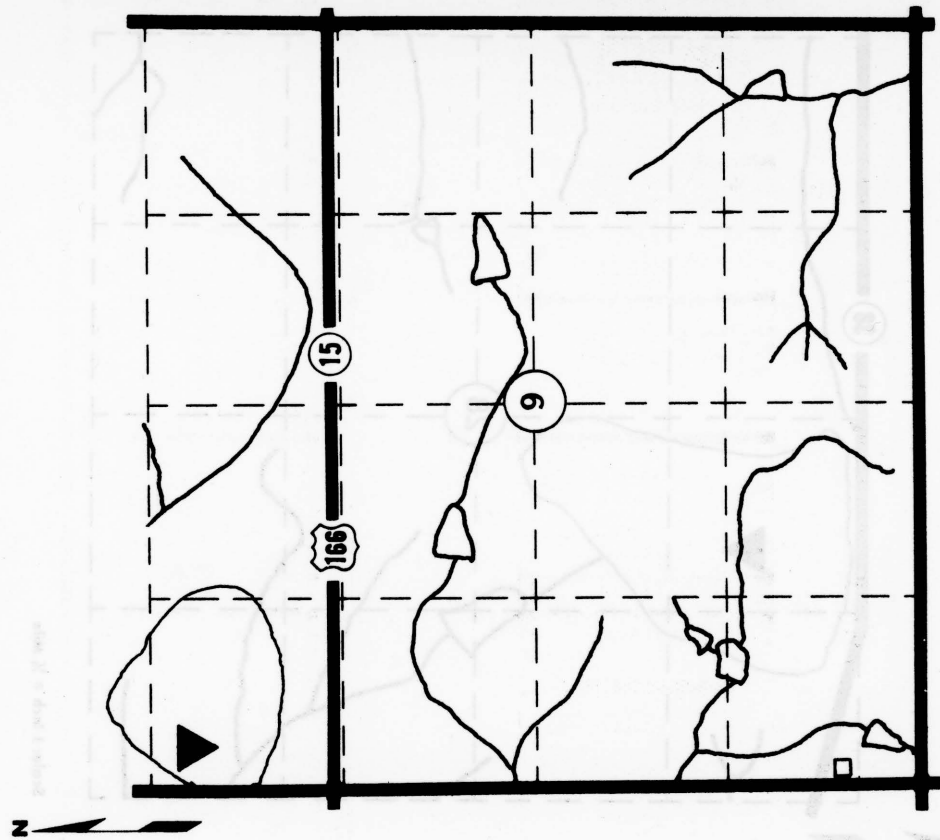
EXPLORATION DATA

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

CORRELATION DATA

Geological Age Permian
 Geological Source Wreford Limestone - Threemile Limestone MBR.
 Material Similar To SHC Lab No. 81617

Specific Gravity (Sat.) 2.37 (Dry) _____
 Los Angeles Wear 35.1
 Absorption 5.67 Soundness 0.92
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1 inch = 1/4 Mile

PROSPECTIVE MATERIALS SITES ; NOT SAMPLED

LEGEND

=====	Trail or lane	■	Open materials sites; sampled
—————	Road	●	Open materials sites; not sampled
+++++	Railroad	▼	Prospective materials sites; sampled
~~~~~	Hedge or trees	◆	Prospective materials sites; not sampled
~~~~~ Name	Major streams	○ 5	Center of section
~~~~~	Intermittent streams	□	Dwelling
~~~~~	Pond or lake	□ +	Cemetery
		□	School
		□	Church
		▣	Town or city

MATERIAL SITE DATA FORM

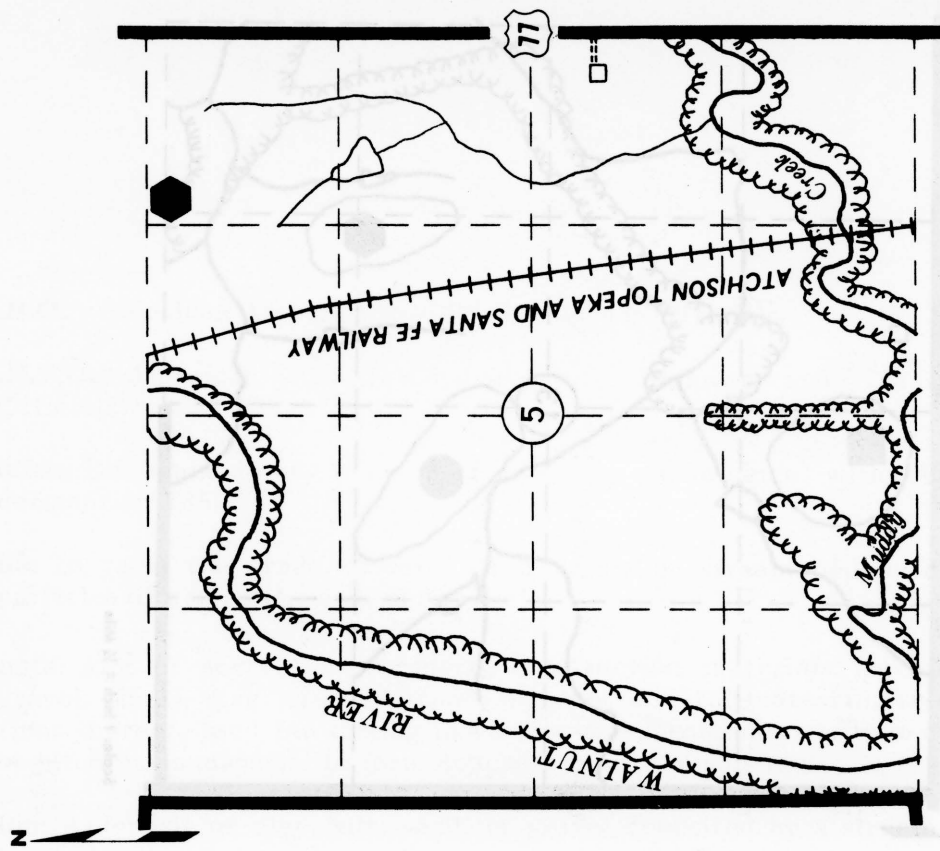
Site No. CG-43 Date Nov. 2, 1977
Qtk
 Material Chert Gravel County Cowley
 Location NE 1/2, NE 1/4 Sec. 5 Twp. 30S Range 4E
 Owner Delbert Wade et al R.R. 1 Douglas, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

Site No. CG-44 Date Nov. 2, 1977
Qtk
 Material Chert Gravel County Cowley
 Location W 1/2, SE 1/4 Sec. 13 Twp. 31S Range 3E
 Owner Boyd & Kenneth Waite R.R. 2, Winfield, Kansas 67156
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Kansan Terrace

Material Similar To _____

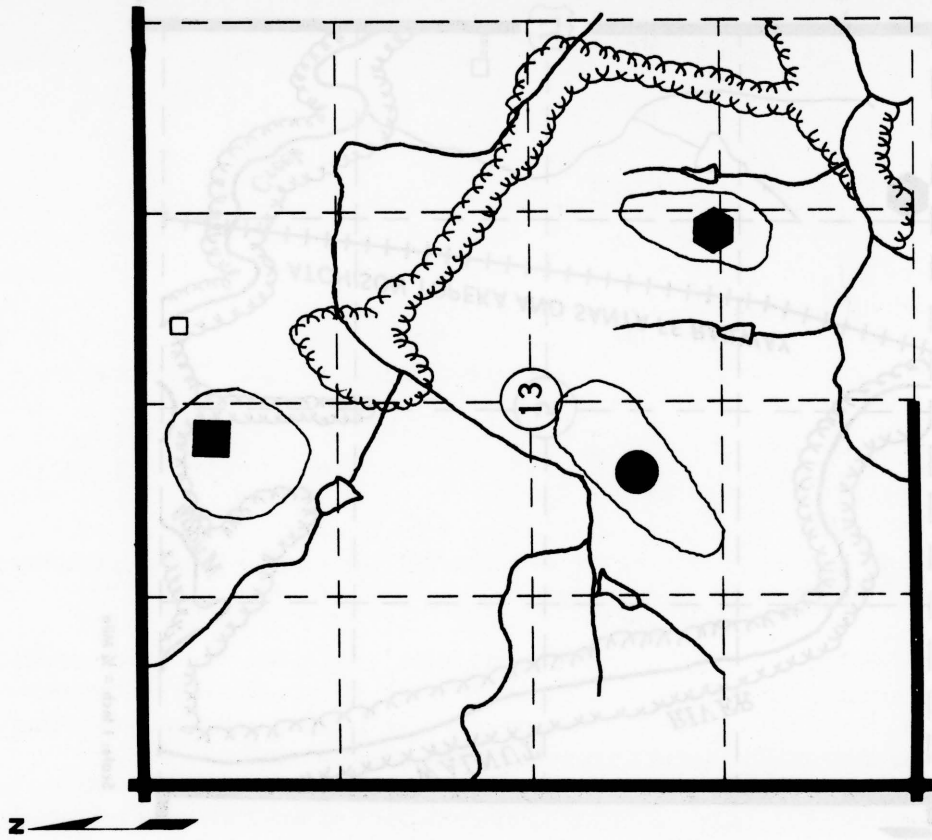
Specific Gravity (Sat.) _____ (Dry) _____

Los Angeles Wear _____

Absorption _____ Soundness _____

Wt. Cu. Ft. _____ Str. Ratio _____

Remarks _____



Scale: 1 Inch = 1/4 Mile

GLOSSARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Dolomitic limestone: A limestone in which the mineral dolomite ($\text{CaMg}(\text{CO}_3)_2$) is conspicuous but calcite is more abundant.

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

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

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

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

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

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

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

Geologic process: Term pertaining to erosion, deposition, and diastrophic methods by which the Earth's surface has been shaped.

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

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

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

Gradation factor: The value obtained by adding the percentages of material retained on the 1½", ¾", ⅜", 4, 8, 16, 30, 50 and 100 sieves, respectively and dividing the sum by 100.

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

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

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

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.

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

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

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

Marine deposits: Deposits laid down in a sea.

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

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

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

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

Orbiculoidea: An inarticulate (neotremate type) having plane pedicel valve of circular outline in which the pedicel issues from a slit located between the centrally placed apex and margin of the valve.

Outwash: (sed.) Soil material washed down a hillside by rainwater and deposited upon more gently sloping land. (glacial geol.) Stratified detritus (chiefly sand and gravel) removed or 'washed out' from a glacier by meltwater streams and deposited in front of or beyond the terminal moraine or the margin of an active glacier.

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

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

Pleistocene Series: Deposits laid down during the Pleistocene Epoch.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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2. Coffey County, Kansas	1966	A. H. Stallard
3. Mitchell County, Kansas	1965	G. Hargadine
4. Sumner County, Kansas	1964	G. Hargadine
5. Linn County, Kansas	1966	G. Hargadine
6. Sherman County, Kansas	1964	G. Hargadine
7. Marshall County, Kansas	1965	G. Hargadine
8. Brown County, Kansas	1966	A. H. Stallard & G. Fenity
9. McPherson County, Kansas	1969	G. Hargadine
10. Harvey County, Kansas	1966	G. Hargadine
11. Osage County, Kansas	1966	A. H. Stallard
12. Kingman County, Kansas	1966	G. Hargadine
13. Pratt County, Kansas	1969	G. Hargadine
14. Morton County, Kansas	1971	G. Hargadine
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17. Rawlins County, Kansas	1968	A. H. Stallard
18. Franklin County, Kansas	1969	A. H. Stallard
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20. Jefferson County, Kansas	1971	A. H. Stallard
21. Butler County, Kansas	1967	G. D. Hargadine
22. Doniphan County, Kansas	1974	G. E. Petersen
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* This Report

** In Progress