

OPEN MATERIALS SITES ; SAMPLED

LEGEND

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

- Open materials sites; sampled
- Open materials sites; not sampled
- ▼ Prospective materials sites; sampled
- ◆ Prospective materials sites; not sampled
- ⑤ Center of section
- Dwelling
- ⊕ Cemetery
- ▣ School
- ⊕ Church
- ▣ Town or city

MATERIAL SITE DATA FORM

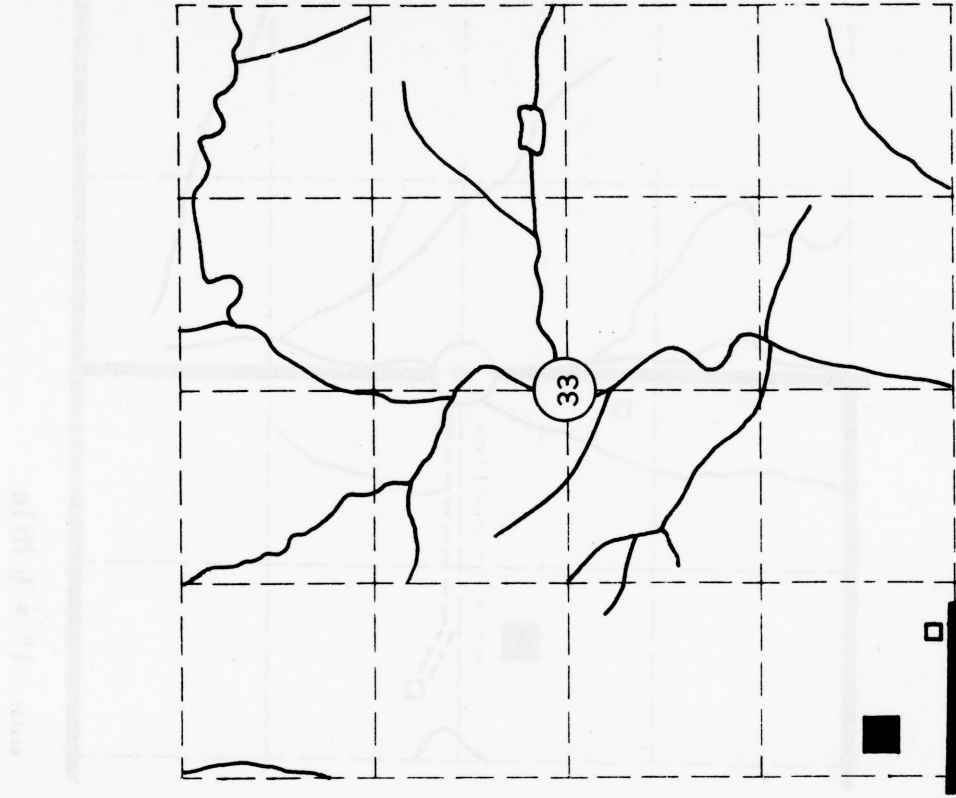
Site No. SG+1 Date August, 1976
 Material Limestone Gravel County Ottawa
 Location SW 1/4 Sec. 33 Twp. 9S Range 5W
 Owner Mrs. Mabel Keim address Ada, Kansas
 Nature of Deposit Dry Accessibility Fair Site Located on Plate I
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained								Wash 200	G.F.	L.L.	P.I.
				1/2	3/4	3/8	4	8	16	30	50				
10	SS	3'	6'	8	21	33	42	47	49	51	53	40.1	30	14	

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan-Kansan Terrace
 Material Similar To 72-22
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

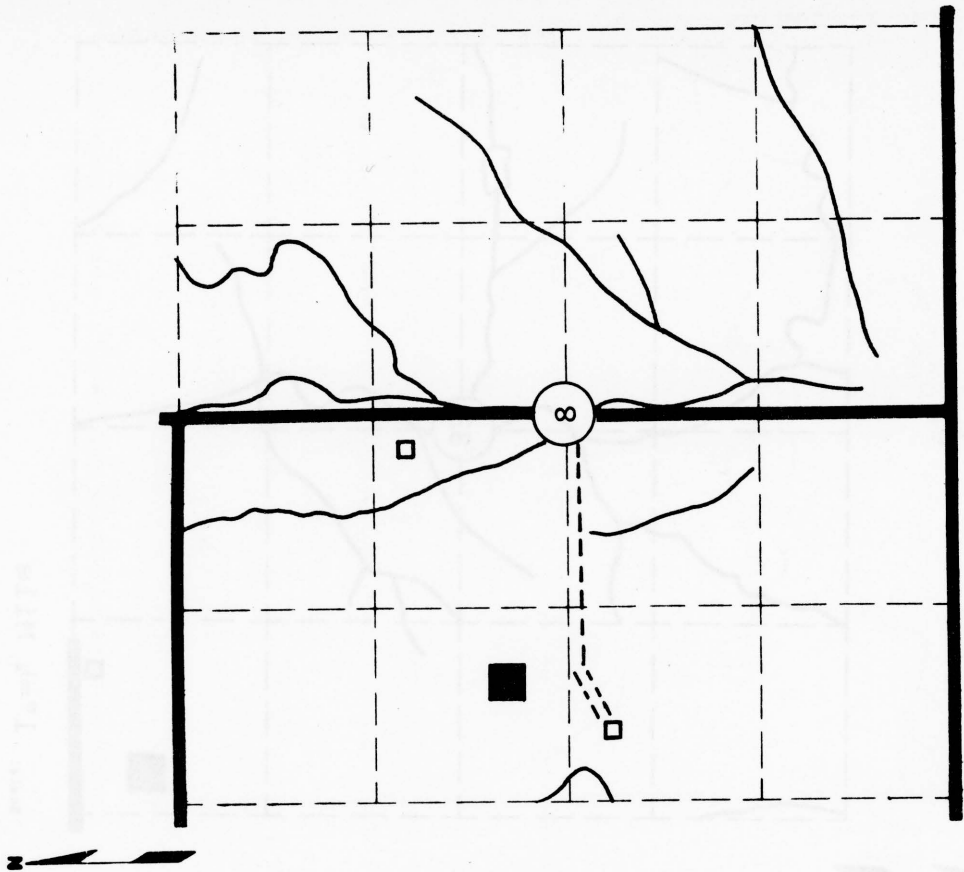
Site No. SG+2 Date August, 1976
Qtn
 Material Limestone Gravel County Ottawa
 Location NW 1/4 Sec. 8 Twp. 10S Range 5W
 Owner Mrs. Charley Larson Ada, KS.
 name address
 Nature of Deposit Dry accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Sampled

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 1/2	3/4	3/8	4	8	16	30	50				
5	Shale	1	4	3	6	13	20	26	31	41	53	6.6	33	13	
23	LS	9	19	12	29	48	62	69	73	76	79	17.9	31	16	
16	Shale	2	16	6	17	30	43	52	58	64	71	25.2	28	12	

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To 72-18
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

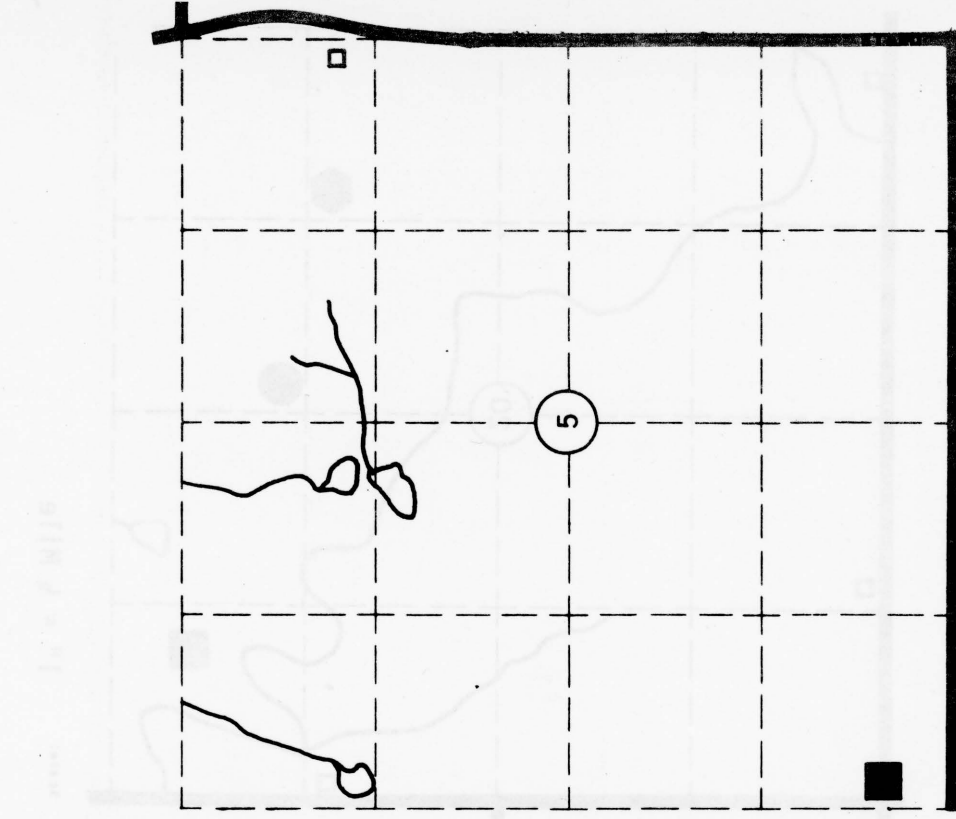
Site No. SG+3 Date August, 1976
Qtn
 Material Limestone Gravel County Ottawa
 Location SW 1/4 Sec. 5 Twp. 10S Range 4W
 Owner Paul A. Rolph Delphos, KS. address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Sampled

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				
4	Shale	2	8	7	15	25	32	38	43	48	56	34.7	22	5	
45	SS	2	5	2	15	34	50	61	67	78	84	2.3	24	8	
6	Shale	2	14	2	18	38	50	57	60	66	74	18.5	23	7	

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan-Kansan Terrace
 Material Similar To 72-21
 Specific Gravity (sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SITE DATA FORM

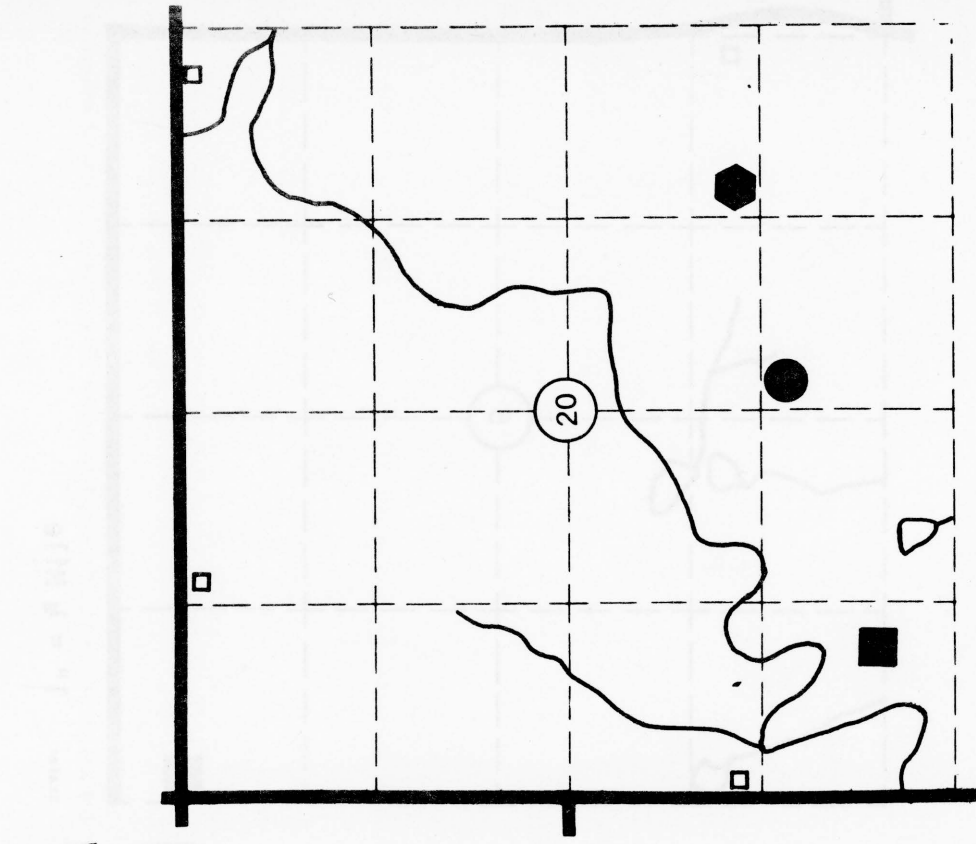
Site No. SG+4 Date August, 1976
Qtn
 Material Sand & Sand Gravel County Ottawa
 Location SW 1/4 Sec. 20 Twp. 9S Range 2W
 Owner J. H. Carson Miltonvale, KS.
 name address
 Nature of Deposit Wet accessibility Fair Site Located on Plate II
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained							Wash 200	G.F.	L.L.	P. I.	
				1 1/2	3/4	3/8	4	8	16	30					50
6	Clay	10	16	2	10	20	27	31	34	44	67	26.5	2.35	19	4
16	Clay	11	20	6	11	17	22	26	31	56	81	13.3	2.50	18	1
8	Sand	9	18	7	20	31	39	44	50	61	77	17.4	3.29	18	2

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To 72-12
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/2 Mile

MATERIAL SITE DATA FORM

Site No. SG+5 Date August
Qtn
 Material Fine Sand, Sand, & Sand Gravel County Ottawa
 Location W 1/2 Sec. 20 Twp. 10S Range 4W
 Owner Leland Stratton address Minneapolis, Kansas
 Nature of Deposit Dry Accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Sampled

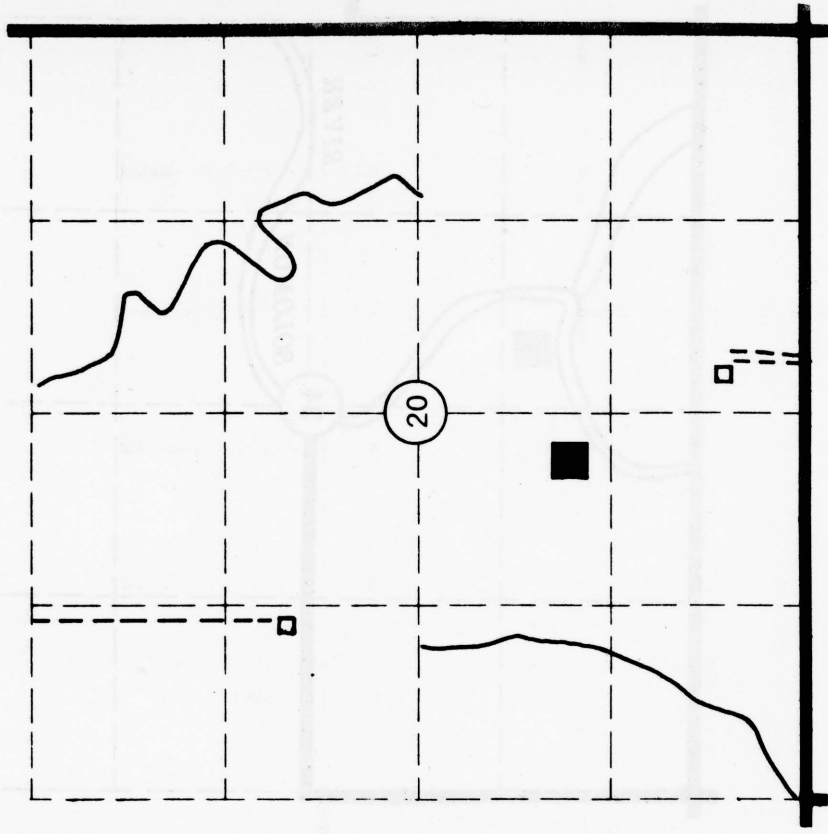
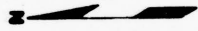
EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained								Wash 200	G.F.	L.L.	P.I.		
				1/2	3/4	3/8	4	8	16	30	50					100	
20	Sand	2	16					0	1	32	82	8.7	1.15	20	1		
29	Shale	8	22			0	5	8	10	22	40	38.5	.97	21	4		
26	Shale	20	23			0	4	9	14	22	30	45	65	20.8	1.89	21	4

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar to 72-13

Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Bar _____
 Absorption _____ Soundness _____
 Wt. Co.Ft. _____ Str. Ratio _____
 Remarks Landfill



MATERIAL SITE DATA FORM

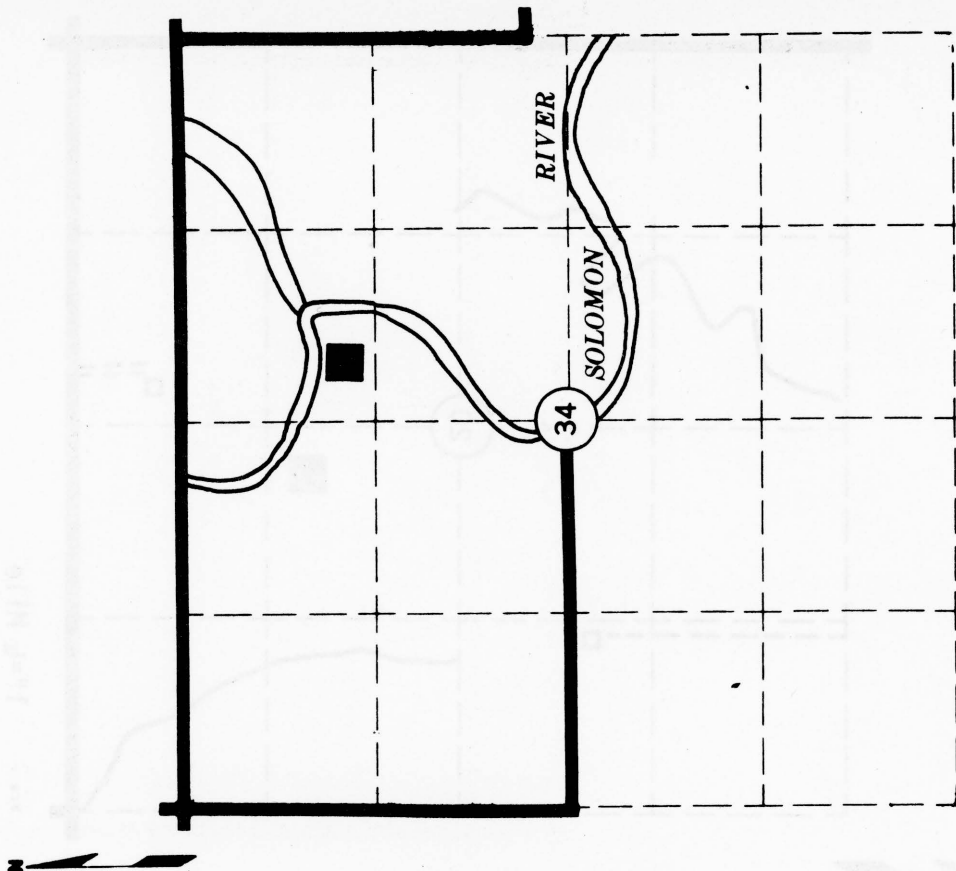
Site No. SG+6 Date August, 1976
 Material Silt & Sand Gravel County Ottawa
 Location NE 1/4 Sec. 34 Twp. 10S Range 4W
 Owner L. V. Baccus name Salina, KS address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Material	Depth of over-burden	Percent Retained							Wash 200	G.F.	L.L.	P.I.		
				1 1/2	3/4	3/8	4	8	16	30					50	100
1	Clay	0	8								0	2	1371.6	.15	29	7
2	Clay	0	10								0	1	686.1	.09	27	7
3	Clay	0	10								0	1	685.4	.09	27	6

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To 72 - 17
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

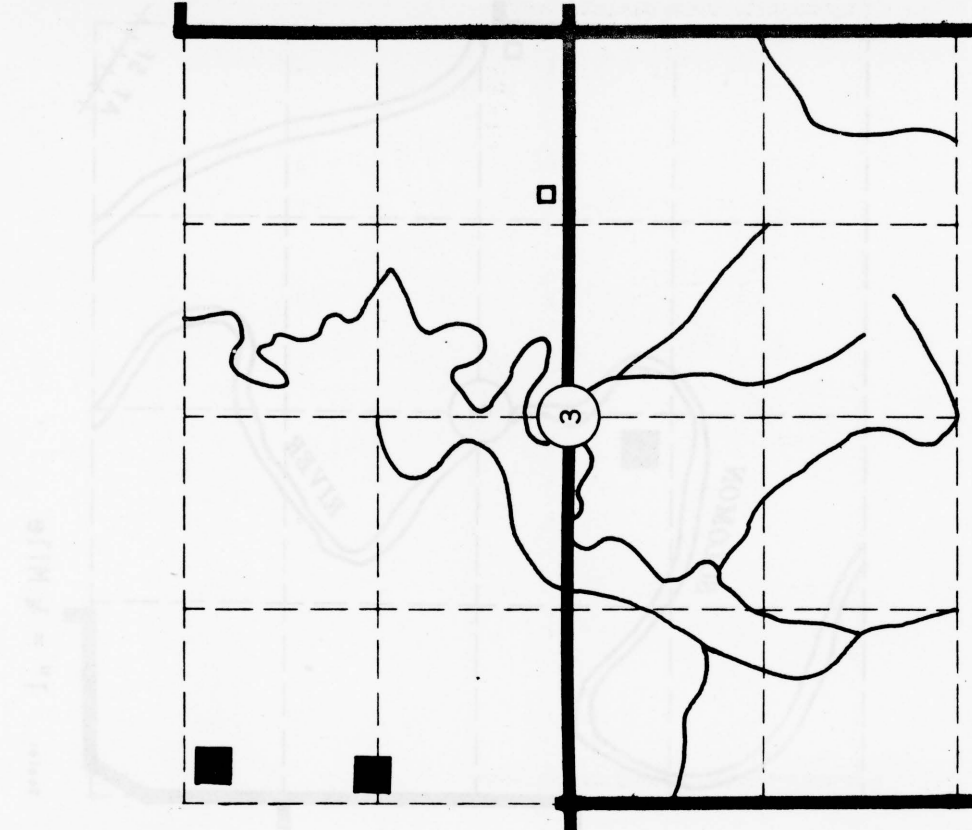
Site No. SG+7 Qtn Date August, 1976
 Material Clay Gravel County Ottawa
 Location NW 1/4 Sec. 3 Twp. 11S Range 5W
 Owner Henery Ward 130 Spruce Minneapolis, KS. address
 Nature of Deposit Dry accessibility Good Site located on Plate IV
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained							Wash 200	S.F.	L.L.	P.I.	
				1/2	3/4	3/8	4	8	16	30					50
10	Clay	9	15	1	8	18	28	36	42	51	65	26.1	2.49	24	8
20	Shale	12	17	5	11	21	35	47	55	74	87	8.7	3.35	18	2
9	Clay	4	11	1	7	18	29	37	42	54	67	25.1	2.55	25	11

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To 72-19
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks Clay Gravel (contains sandstone fragments)



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

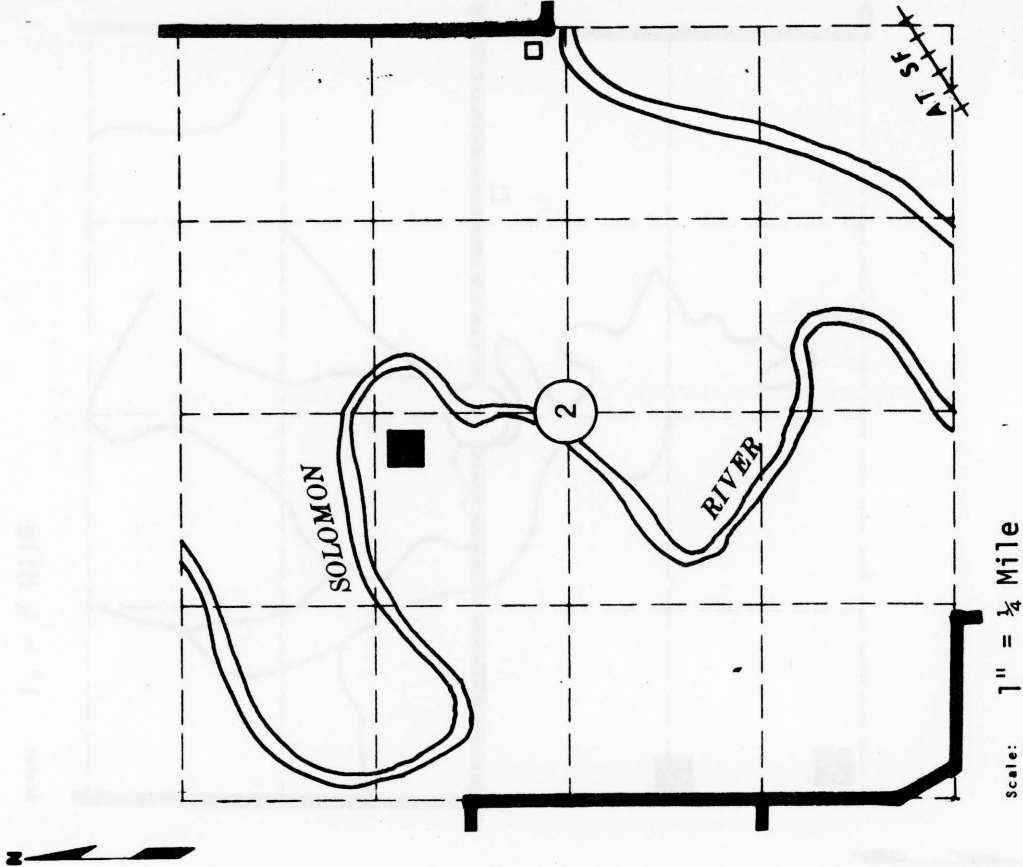
Site No. SG+8 Date August, 1976
 Material Silt & Sand Gravel County Ottawa
 Location NW 3/4 Sec. 2 Twp. 11S Range 4W
 Owner Ernest Watson Rte. 1 Minneapolis, Kansas
 Name Ernest Watson address
 Nature of Deposit Wet Accessibility Fair Site Located on Plate V
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained								Wash 200	G.F.	L.L.	P.I.	
				1/2	3/4	3/8	4	8	16	30	50					100
				0	1	5	16	38	78	95	97					
				0	2	8	20	44	79	95	97					

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To 72-11
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SITE DATA FORM

Site No. Si+9 Date 8/11/76
Qa1
 Material River Silt county Ottawa
 Location S 1/2 NE 1/4 Sec. 12 Twp. 11S Range 4W
 Owner Bernard Clayton address Minneapolis, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate V
 Status of Site Open Materials Site; Sampled

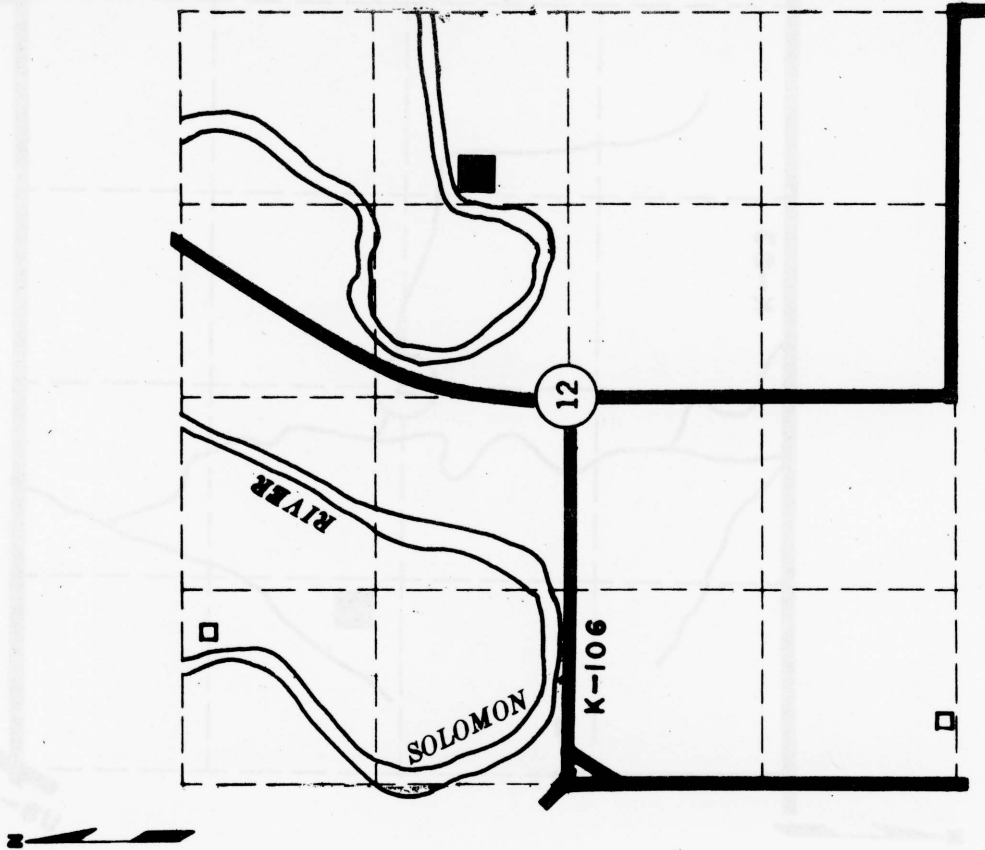
EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained							Mesh 200	G.F.	L.L.	P.I.		
				1 1/2	3/4	3/8	4	8	16	30					50	100
1	Silt	1	10								0	2	89		27	3

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To 72-10

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. FS+10 Date August, 1976
Kd
 Material Fine Sand County Ottawa
 Location N½ SW¼ Sec. 14 Twp. 11S Range 3W
 Owner Fred Schoeller Minneapolis, KS
 name address
 Nature of Deposit Dry accessibility Good site located on Plate V
 Status of Site Open Materials Site; Sampled

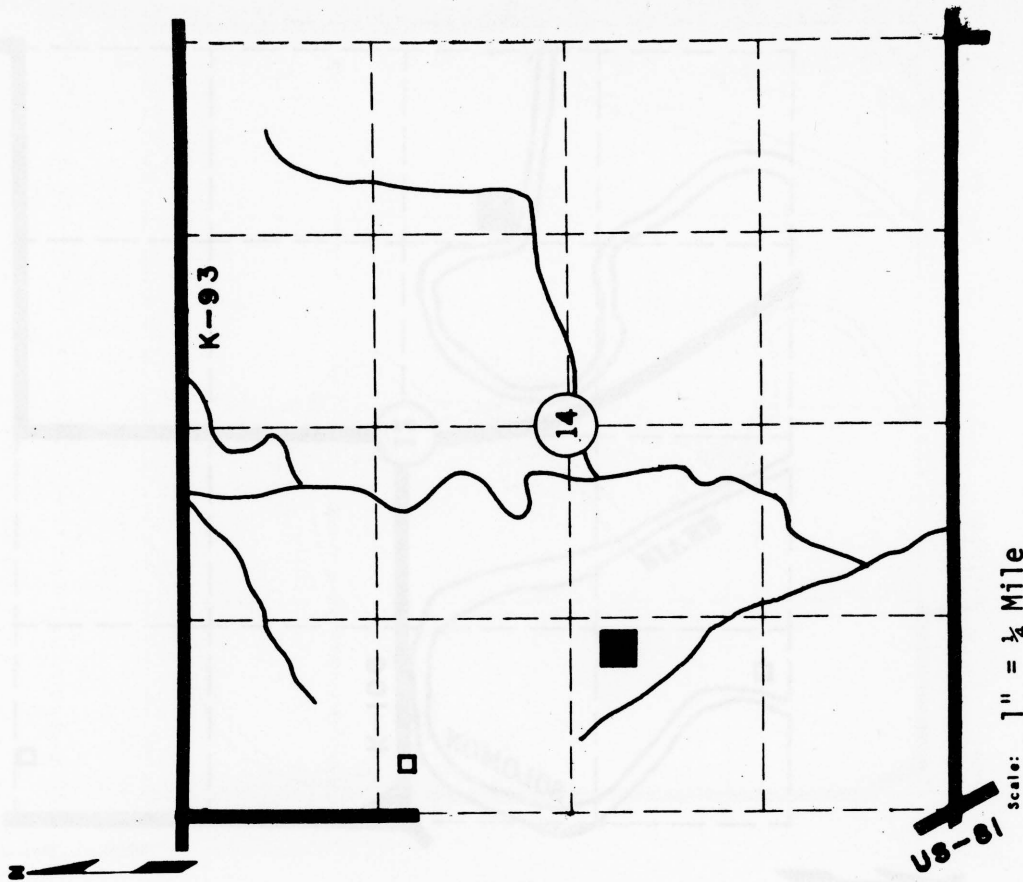
EXPLORATION DATA

Test Note	Material at bottom of hole	Depth of overburden	Depth of Material	Percent Retained							Wash 200	G.F.	L.L.	P.I.	
				1/2	3/4	3/8	1/4	1/16	1/32	1/64					
7	Sand	43	50			0	1	1	2	7	1760.5	.28	22	3	
22	Shale	7	12	1	3	5	11	36	77	87	89	9.7	3.14	43	26
7	Sand	25	38			0	1	1	1	4	4928.7	.55	24	1	

CORRELATION DATA

Geological Age Cretaceous
 Geological Source Dakota Formation
 Material Similar To 72-16

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



MATERIAL SITE DATA FORM

Site No. FS+11 Date August, 1976
Qtn
 Material Fine Sand County Ottawa
 Location E $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 12 Twp. 12S Range 5W
 Owner Viola Hitchcock address Tescott, Kansas
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Sampled

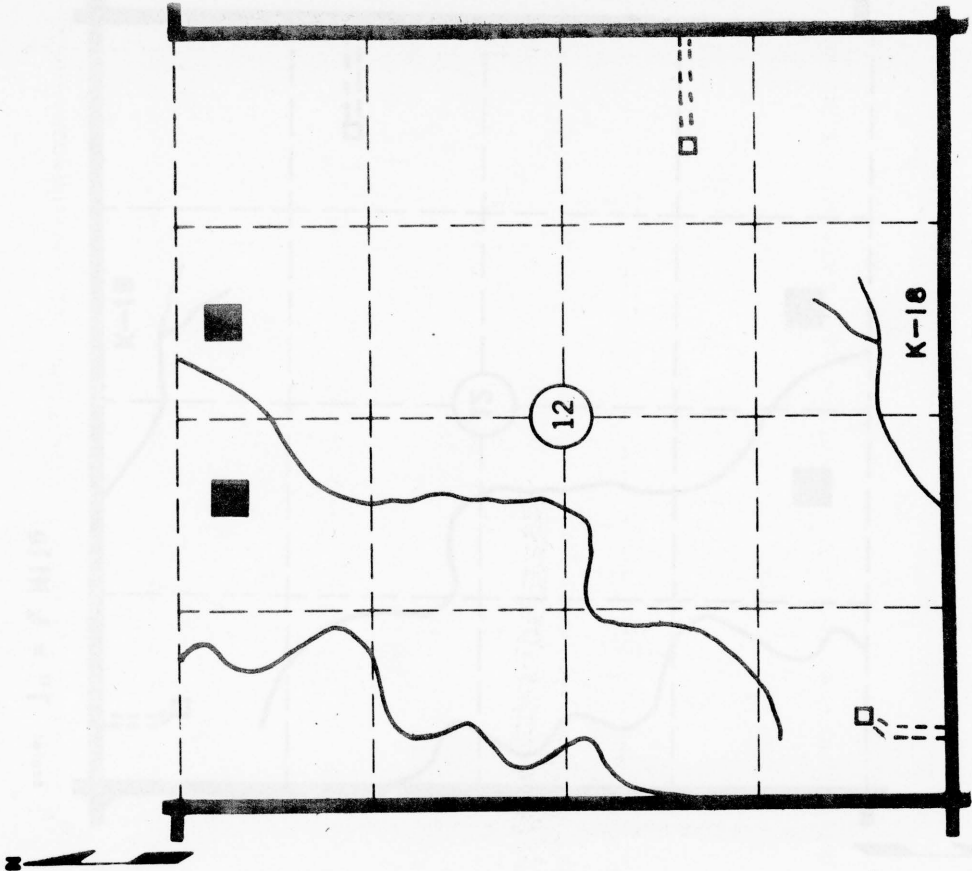
EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Material	Percent Retained								Wash 200	G.F.	L.L.	P.I.			
			1 1/2	3/4	3/8	4	8	16	30	50					100		
22	Clay	0						0	1			22	81	11	1.04	19	1
31	Water	0					0	1	1	1		15	52	35	.70	20	4
5	Clay	24					0	1	1	2		28	69	21	1.01	19	2

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To 72-3R

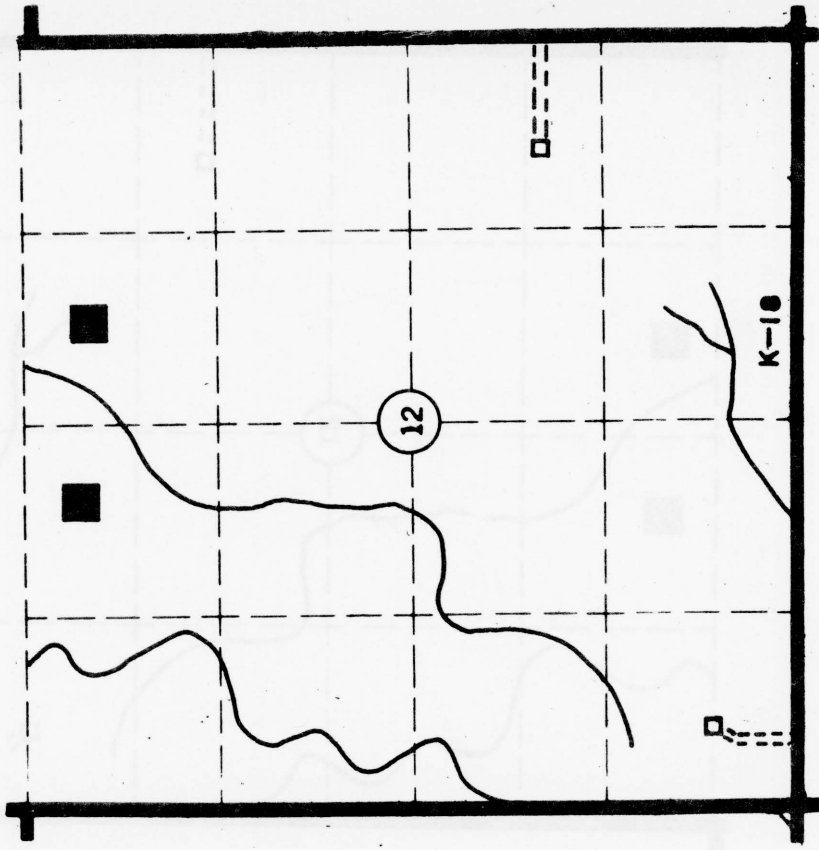
Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. FS+12 Date August, 1976
 Material Qtn County Ottawa
 Location W₂₃ NE_{1/4} Sec. 12 Twp. 12S Range 5W
 Owner Earl E. Johnson Address Tescott, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled



Scale: 1" = 1/4 Mile

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained							Wash 200	S.F.	L.L.	P.L.			
				1 1/2	3/4	3/8	4	8	16	30					50	100	
5	Clay	0	7								0	21	84	8	1.05	18	2
30	Clay	14	17				0	1			1	6	38	47	.46	21	5
13	Clay	0	1								0	22	70	22	.92	18	3

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To 72-3R2
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____

MATERIAL SITE DATA FORM

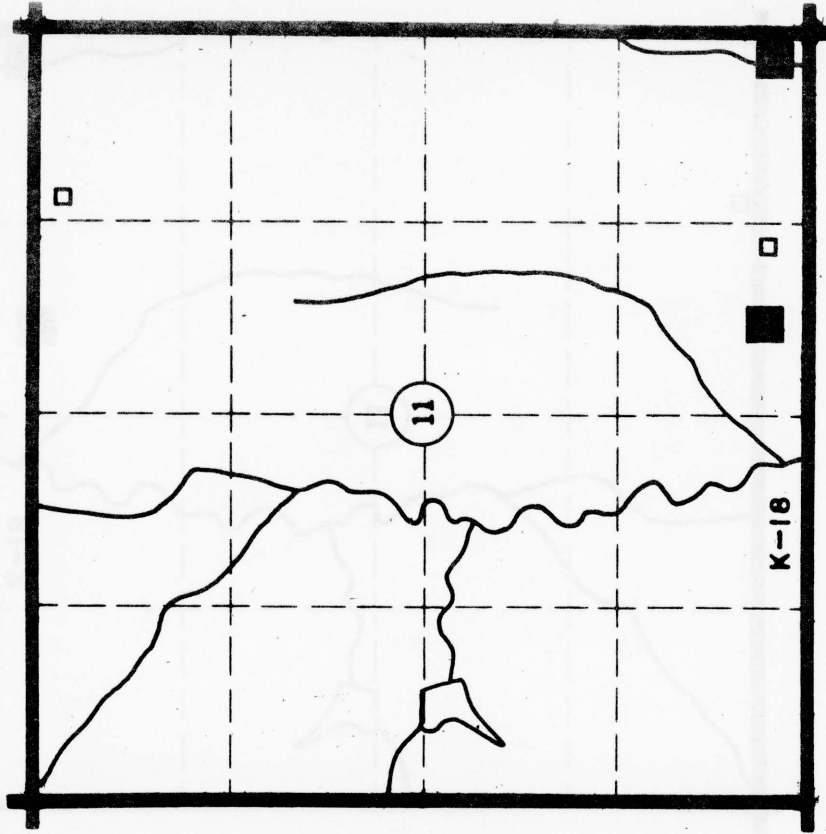
Site No. Si-13 Date August, 1976
Qtn
 Material Binder Soil County Ottawa
 Location SE 1/4 Sec. 11 Twp. 12S Range 5W
 Owner W. B. Horting Tescott, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site located on Plate VII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained					Wash 200	G.F.	L.L.	P.I.	
				1/2	3/4	1	16	30					50
6	SCL	0	1						27	61		27	10

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar to 72-4
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Co. ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

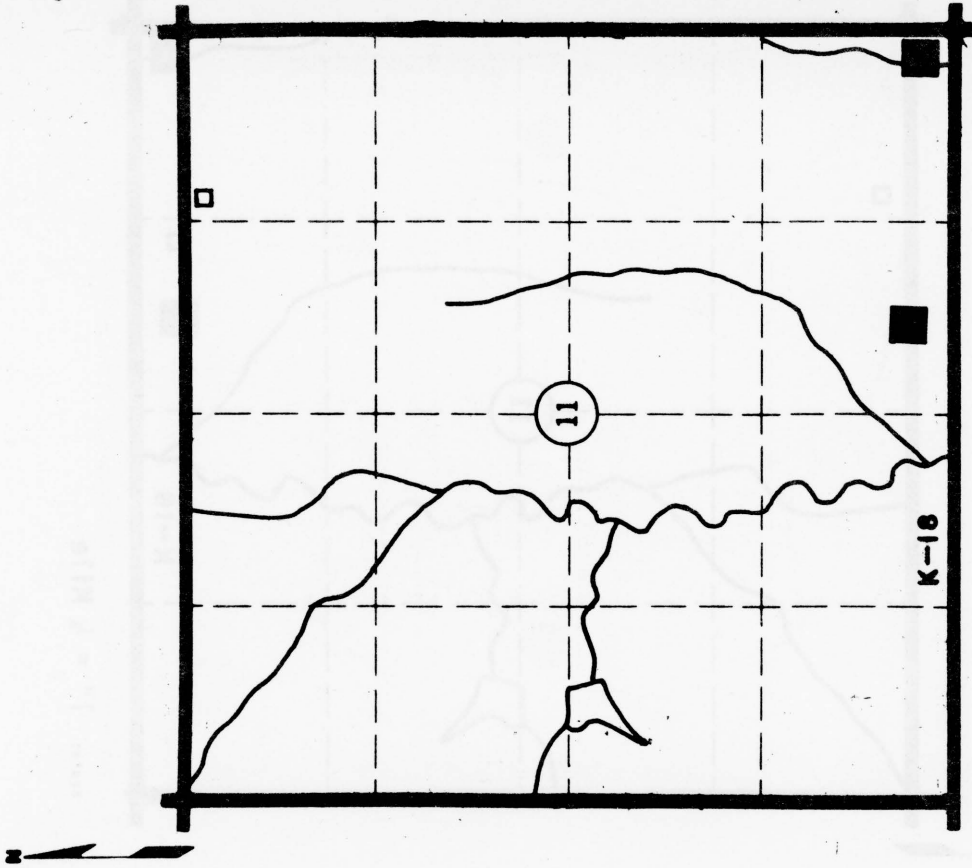
Site No. FS-14
Qtn
 Date August, 1976
 Material Blow Sand (sandy loam topsoil) County Ottawa
 Location SE 1/4 SE 1/4 Sec. 11 Twp. 12S Range 5W
 Owner W. B. Horting Tescott, Kansas address
 Nature of Deposit Cultivated Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained					Wash 200	S.F.	L.L.	P.I.
				1/2	3/4	3/8	5/16	3/32				
4	5	0	3				8	45	38	16	2	

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To 72-2
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Co. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

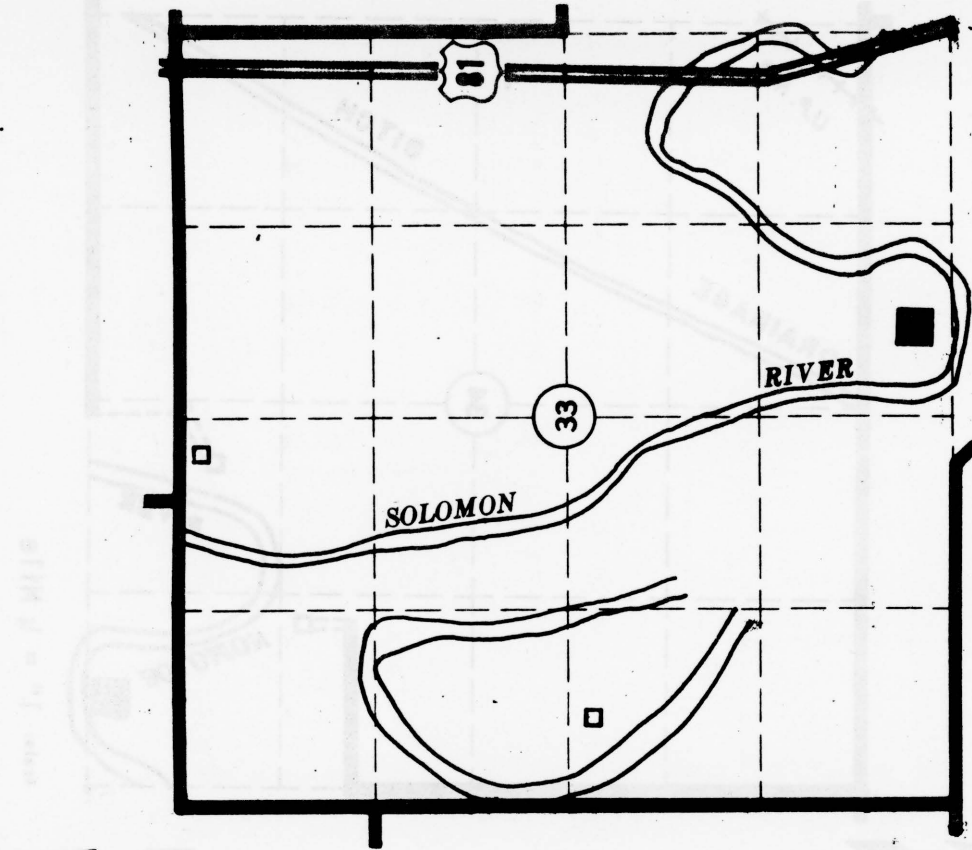
Site No. FS+15 Date August, 1976
0a1
 Material Fine Sand & Silt County Ottawa
 Location W 1/2 SE 1/4 Sec. 33 Twp. 11S Range 3W
 Owner Fred Schoeller address Minneapolis, KS.
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Material	Percent Retained					Wash 200	G.F.	L.L.	P.I.		
			1 1/2	3/4	3/8	4	8						
2	H2O	0 15				0	1	4	7	87.6	.12	28	8
1	Sand	6 16			0	2	15	49	61	33.2	1.27	18	3
7	Clay	3 15			0	1	1	3	15	69.1	.20	25	5

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To 72-14
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SITE DATA FORM

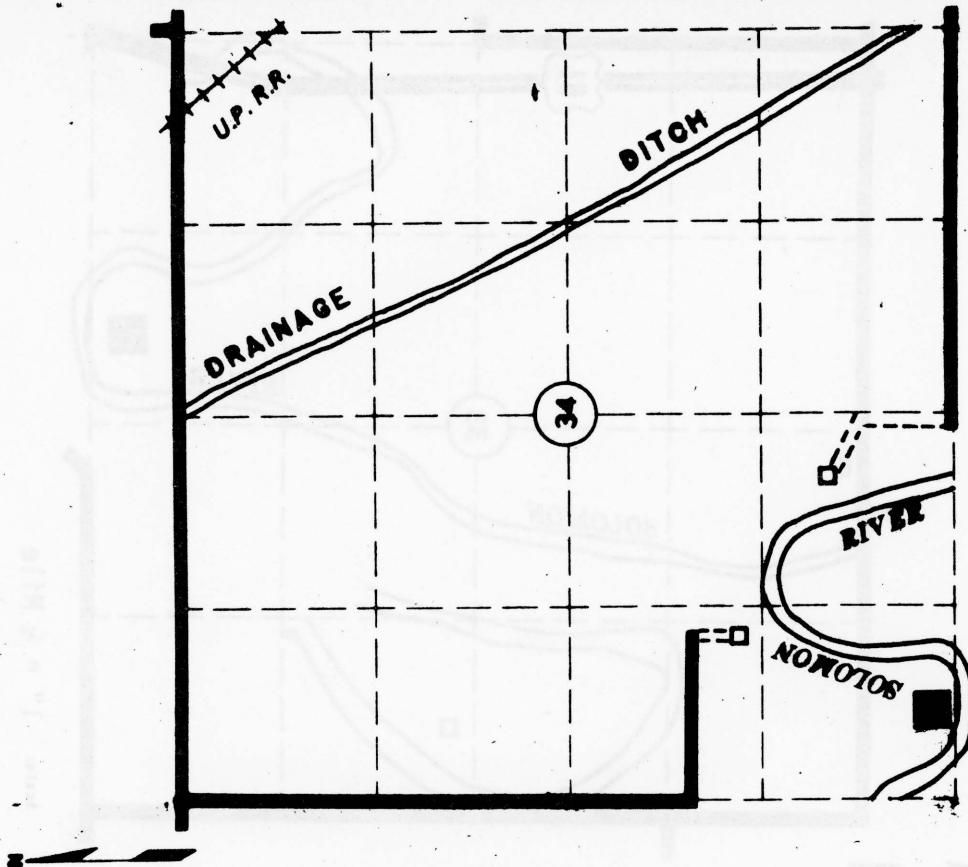
Site No. FS+16 Date August, 1976
Qa1
 Material Sand, Fine Sand, & Silt county Ottawa
 Location SW $\frac{1}{4}$ Sec. 34 Twp. 11S Range 3W
 Owner Fred Schoeller Minneapolis, Kansas address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained							Mesh 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8	16	30				
9	Clay	0	10					0	1	2	95.2	.03	30	7
10	Clay	5	15			0	1	3	20	64.4	.25	25	5	
8	Clay	0	10			0	1	6	83.9	.07	28	6		

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To 72-15
 Specific Gravity (sat.) (dry)
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Cu.ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SITE DATA FORM

Site No. FS+17 Date August, 1976
Qds
 Material Fine Sand County Ottawa
 Location S 2/3 SE 1/4 Sec. 34 Twp. 11S Range 2W
 Owner Bob Werhan 876 S. 9th Salina, KS
 Name 876 S. 9th address
 Nature of Deposit Wet Accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Sampled

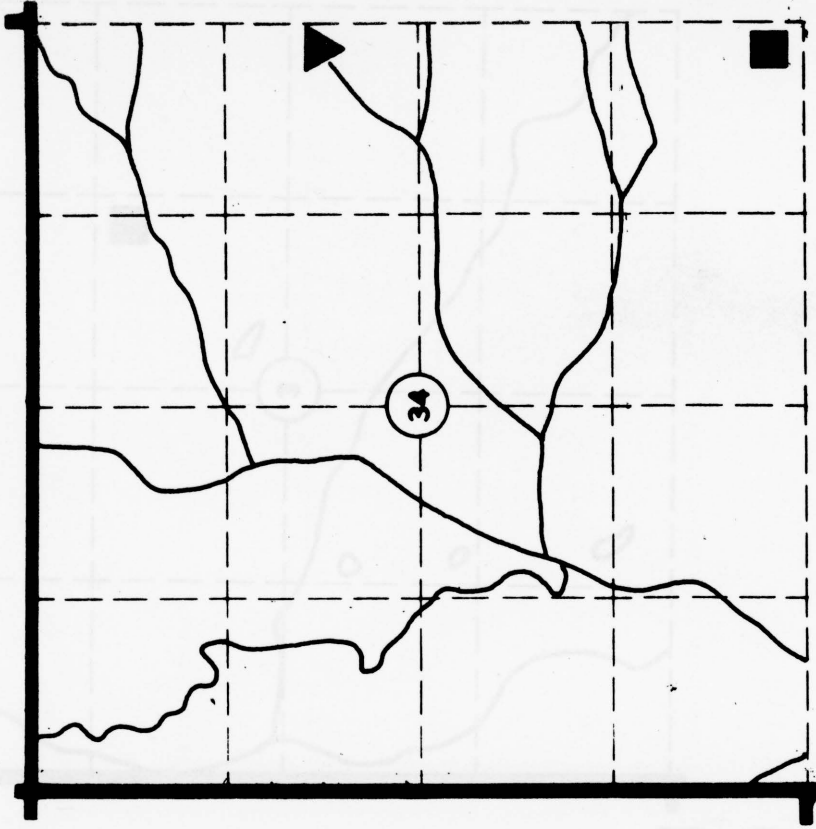
EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained							Wash 200	G.F.	L.L.	P.I.		
				1/2	3/8	3/16	1/8	1/16	3/32	1/32						
18	Shale	1	10				0	1	1	2	26	64	30.6		20	1
15	Shale	0	3						0	1	44	88	6.3		17	1
3	Shale	1	9						0	3	44	80	15.7		18	1

CORRELATION DATA

Geological Age Quaternary
 Geological Source Dune Sand
 Material Similar To 72-20
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Co. ft. _____ Str. Ratio _____
 Remarks _____

Scale: 1" = 1/4 Mile



MATERIAL SITE DATA FORM

Site No. FS+18 Date August, 1976
Qds
 Material Blow Sand County Ottawa
 Location SE 1/4 Sec. 3 Twp. 12S Range 2W
 Owner Jake Fisher Salina, Kansas 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	Percent Retained						Wash 200	G.F.	L.L.	P.L.
				1/2	3/4	3/8	1/4	3/16	1/8				
1	Clay	0	5						74	85			0
3	Clay	0	7.5						77	83		16	1

CORRELATION DATA

Geological Age Quaternary
 Geological Source Dune Sand
 Material Similar To 72-1
 Specific Gravity (Sat.) (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

OPEN MATERIALS SITES ; NOT SAMPLED

LEGEND

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

- Open materials sites; sampled
- Open materials sites; not sampled
- ▼ Prospective materials sites; sampled
- ◆ Prospective materials sites; not sampled
- ⑤ Center of section
- Dwelling
- ⊕ Cemetery
- ▣ School
- ⊕ Church
- ▣ Town or city

MATERIAL SITE DATA FORM

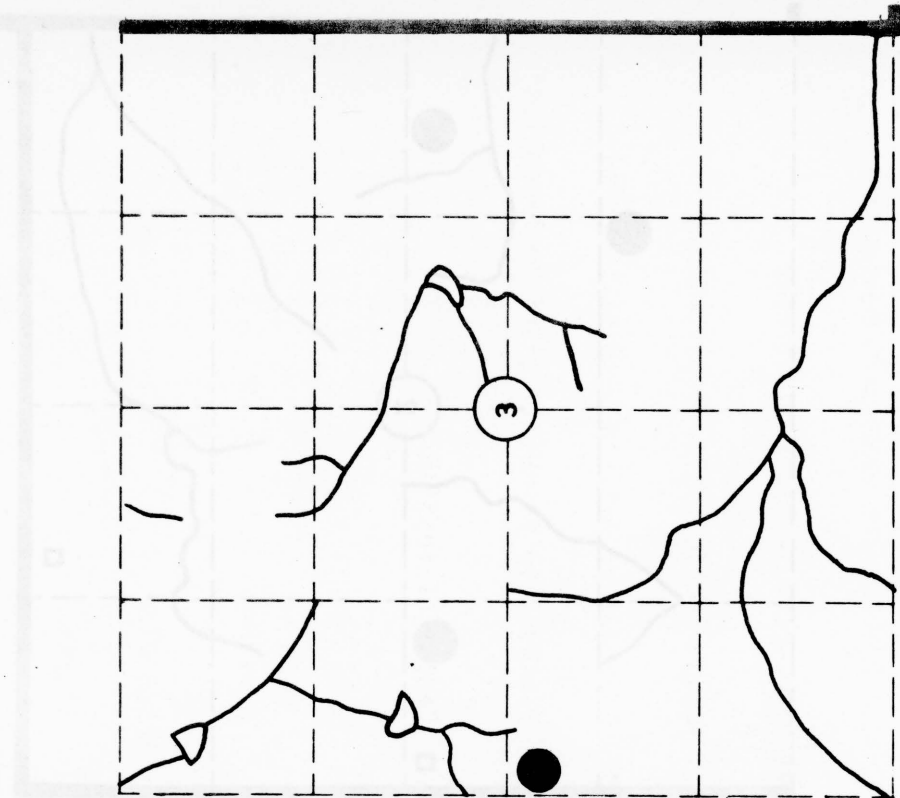
Site No. LS-19 Date August, 1976
Kg
 Material Limestone County Ottawa
 Location SW $\frac{1}{4}$ Sec. 3 Twp. 9S Range 5W
 Owner James Griffin Delphos, KS
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

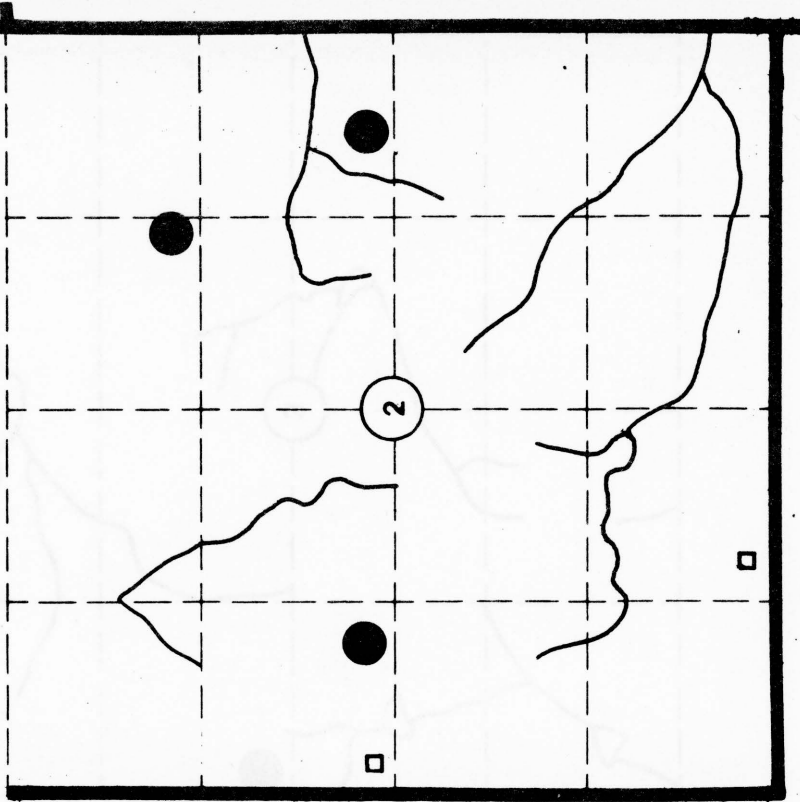
Site No. SG-20 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location NW $\frac{1}{4}$ Sec. 2 Twp. 9S Range 5W
 Owner D.&L. Stricklett Glasco, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained								Wash 200	S.F.	L.L.	P.L.	
				1/2	3/4	1	16	30	50	100	200					

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

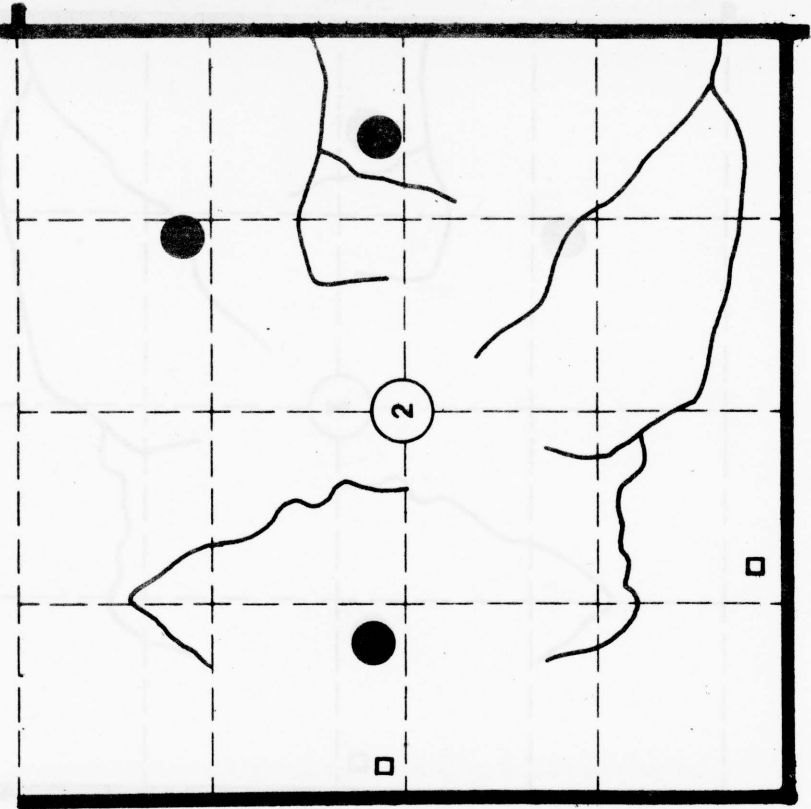
Site No. SG-21 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location NE 1/4 Sec. 2 Twp. 9S Range 5W
 Owner W. Butler Estate 1st Nat. Bank Glascos, KS
 address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of overburden	Depth of Material	Percent Retained																
				1 1/2	3/4	3/8	1/4	3/16	1/8	3/32	1/32	Wash 200	G.F.	L.L.	P.I.					

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To _____
 Specific Gravity (set.) _____ (dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Abandoned



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

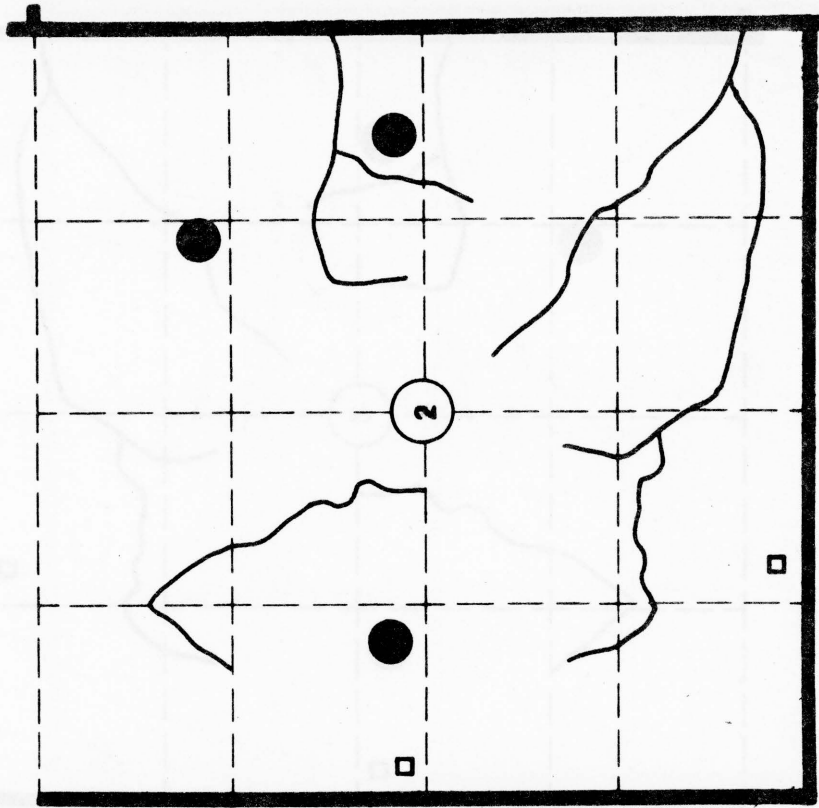
Site No. SG-22 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location SE 1/4 NE 1/4 Sec. 2 Twp. 9S Range 5W
 Owner W. Butler Estate 1st Nat. Bank Glasco, KS.
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained							Wash 200	G.F.	L.L.	P.I.		
				1 1/2	3/4	3/8	1/4	3/16	1/8	3/32					1/32	

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar to _____
 Specific Gravity (sat.) _____ (dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.ft. _____ Str. Ratio _____
 Remarks Abandoned



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

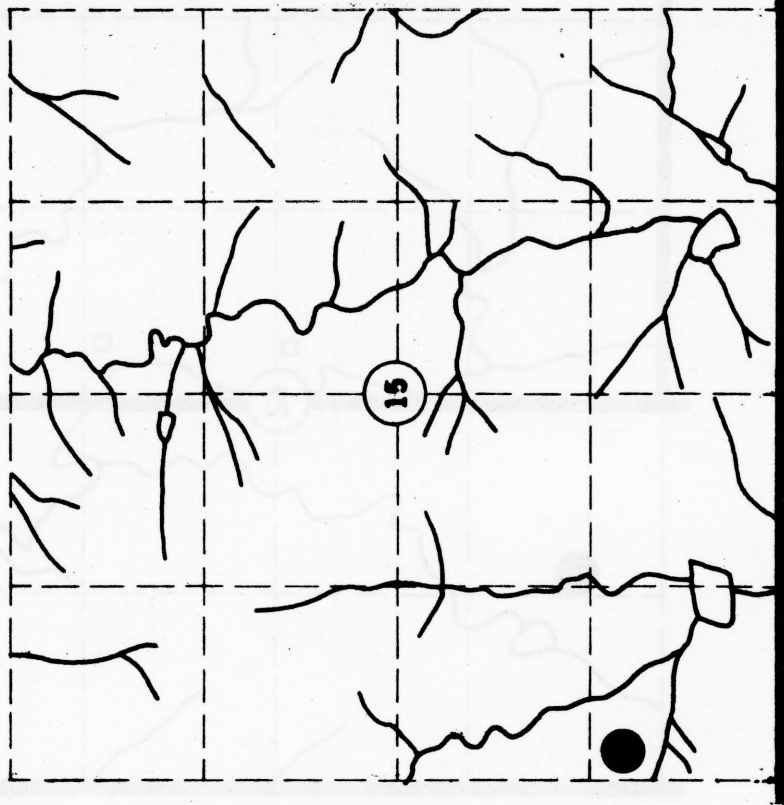
Site No. LS+23 Date August, 1976
Kg
 Material Limestone County Ottawa
 Location SW $\frac{1}{4}$ Sec. 15 Twp. 9S Range 5W
 Owner Ralph Warnow Route 1 Minneapolis, KS.
 address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	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 Cretaceous
 Geological Source Greenhorn Limestone
 Material Similar to _____
 Specific Gravity (sat.) _____ (dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

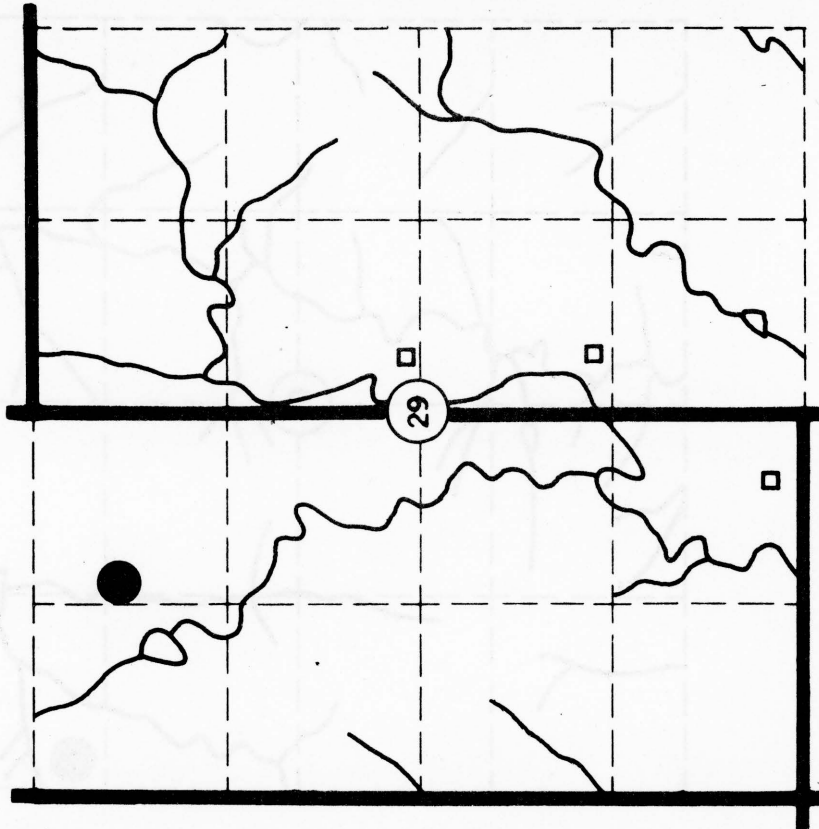
Site No. LS+24 Kg Date August, 1976
 Material Limestone County Ottawa
 Location NW¼ Sec. 29 Twp. 9S Range 5W
 Owner P.P. Kunc Parker Motel Minneapolis, KS
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Note	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 Cretaceous
 Geological Source Greenhorn Limestone
 Material Similar To _____
 Specific Gravity (sat.) _____ (dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

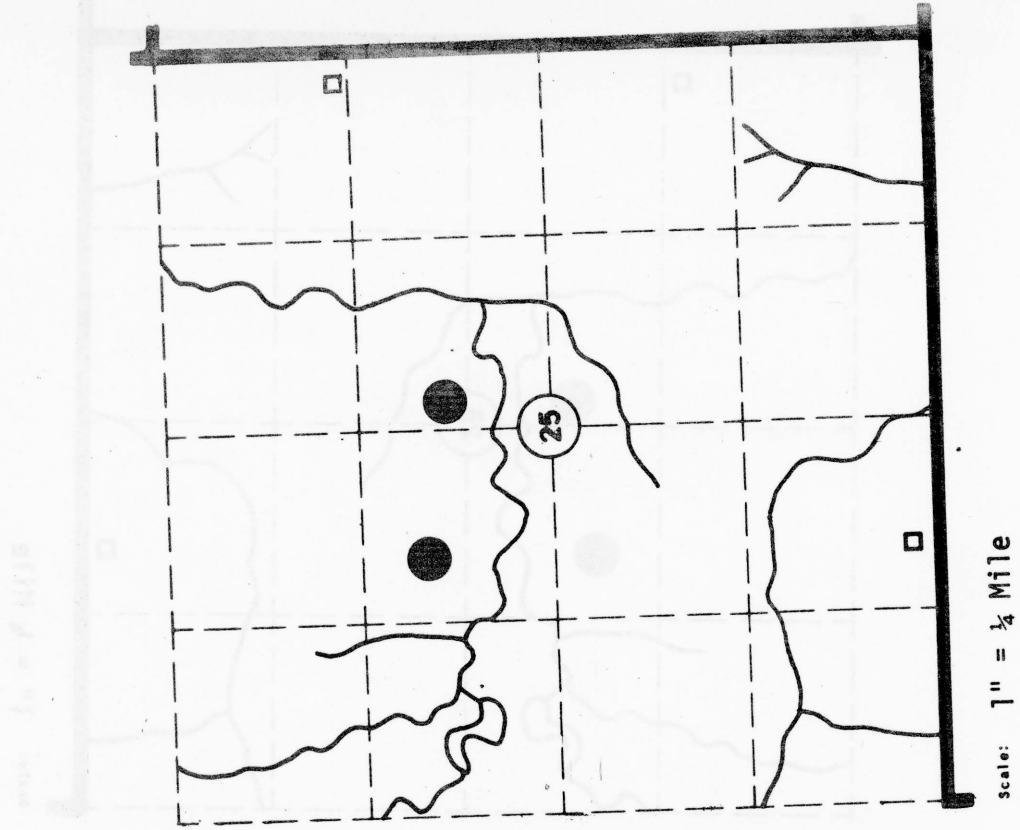
Site No. SG-25 Date August, 1976
Qtn
 Material Limestone Gravel County Ottawa
 Location SE 1/4 NW 1/4 Sec. 25 Twp. 9S Range 5W
 Owner J. J. Hollis 1529 Ellis Wichita, KS.
address
 Nature of Deposit Dry accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

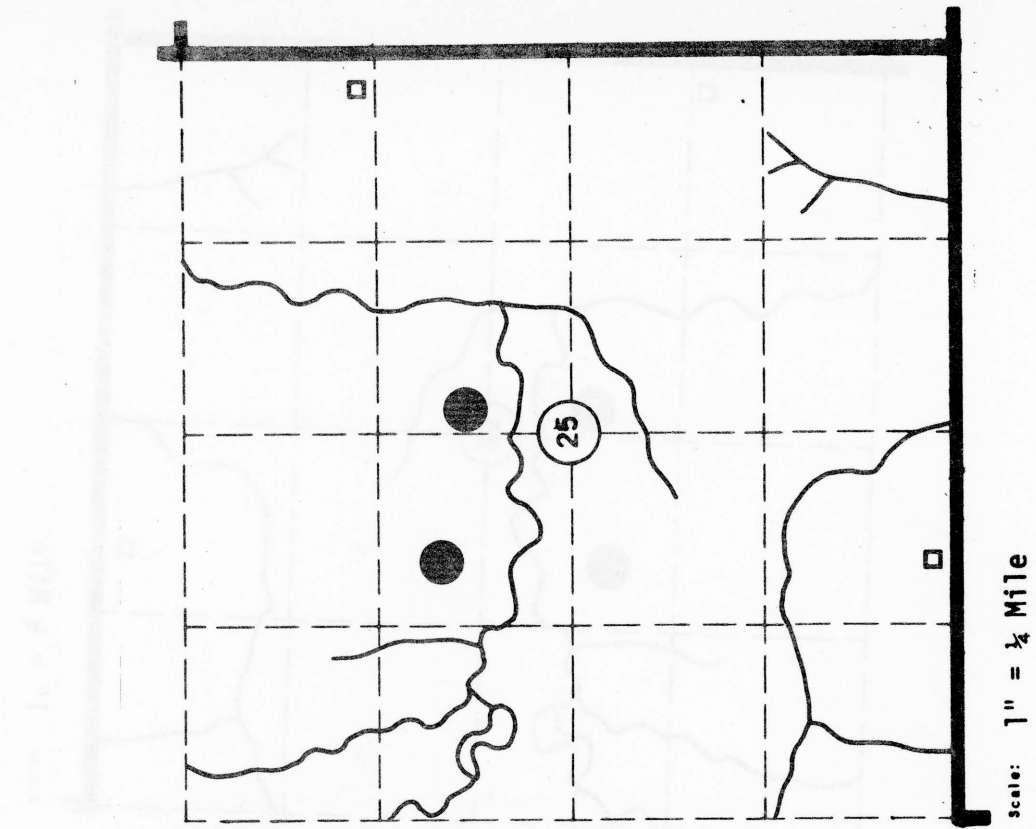
Site No. SG-26 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location NE 1/4 Sec. 25 Twp. 9S Range 5W
 Owner Corliss Paramore Delphos, KS.
 address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	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 Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To _____
 Specific Gravity (sat.) _____ (dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Co. ft. _____ Str. Ratio _____
 Remarks Abandoned



MATERIAL SITE DATA FORM

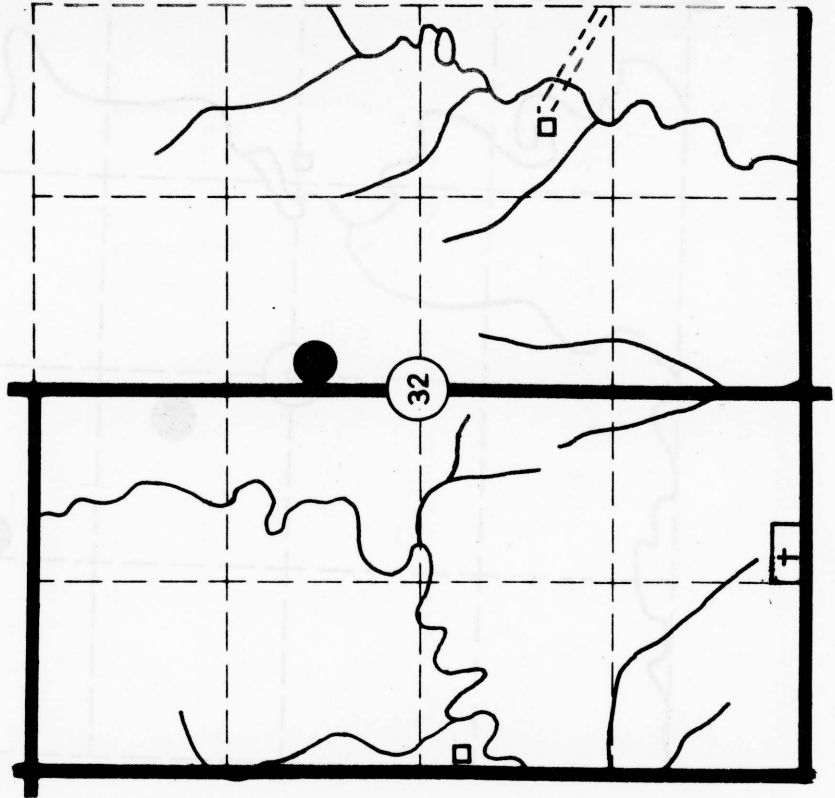
Site No. SG-27 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location NE 1/4 Sec. 32 Twp. 9S Range 5W
 Owner Mabel Keim address Ada, KS.
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

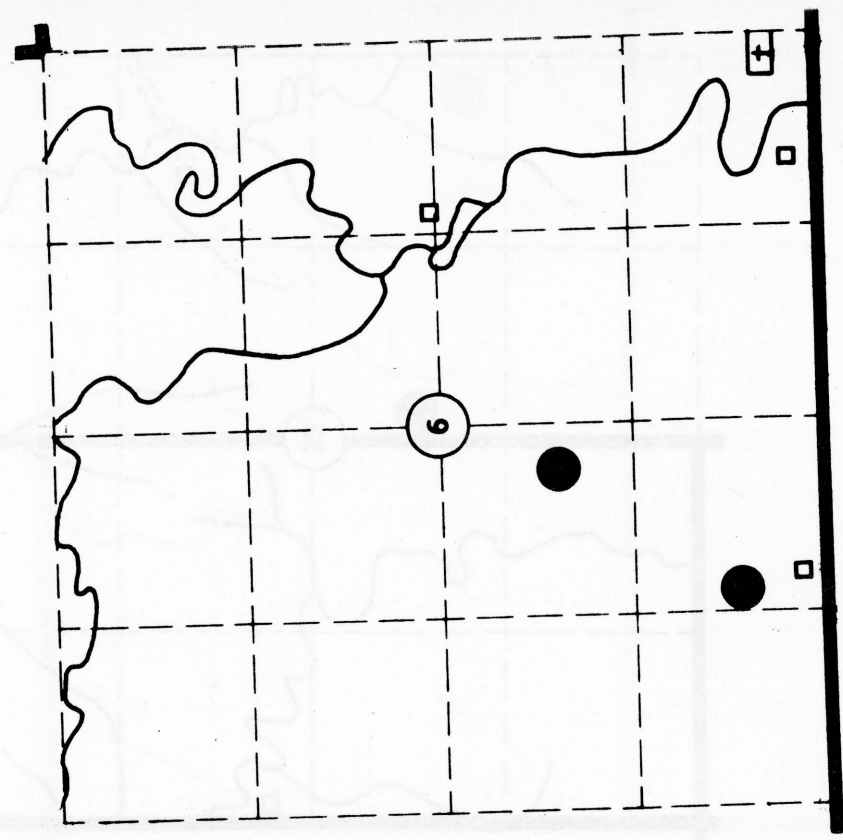
Site No. SG-28 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location NE 1/4 SW 1/4 Sec. 6 Twp. 10S Range 5W
 Owner Hazel Srna name Barnard, KS address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Material	Percent Retained					Wash 200	G.F.	L.L.	P.I.
			1/2	3/4	3/8	1/4	1/20				

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

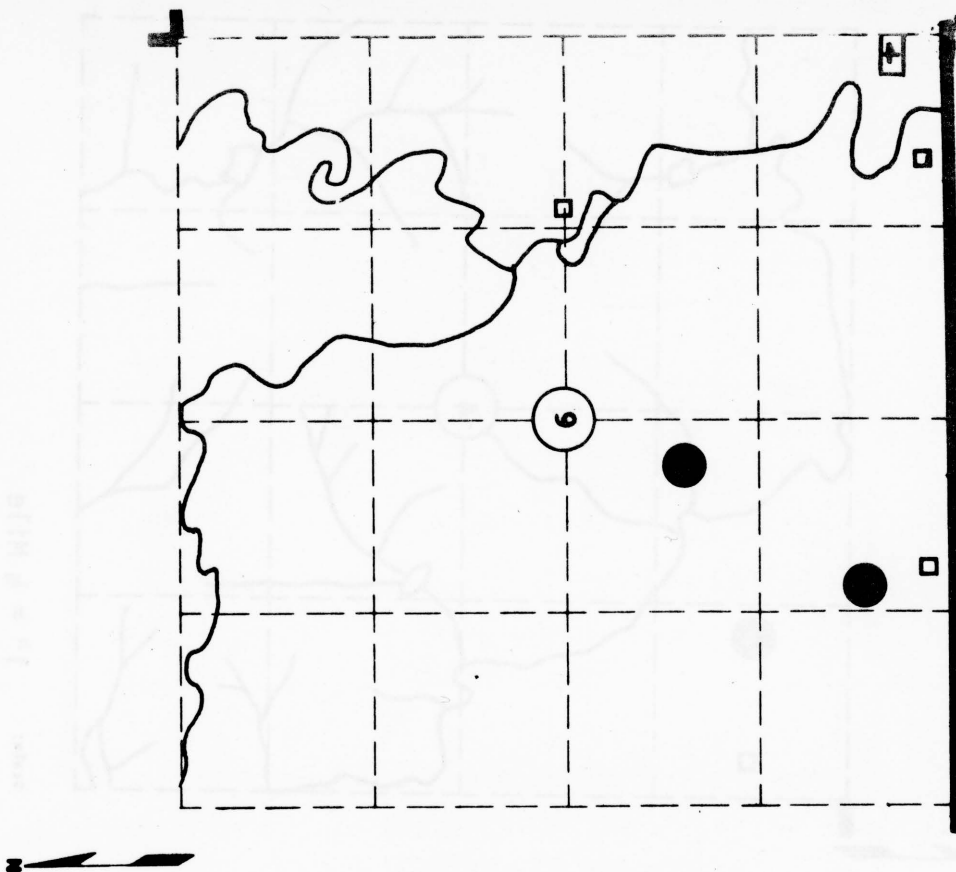
Site No. SG-29 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location SE 1/4 SW 1/4 Sec. 6 Twp. 10S Range 5W
Hazel Srna name address Barnard, KS.
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Overburden	Depth of Material	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 Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks Abandoned



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

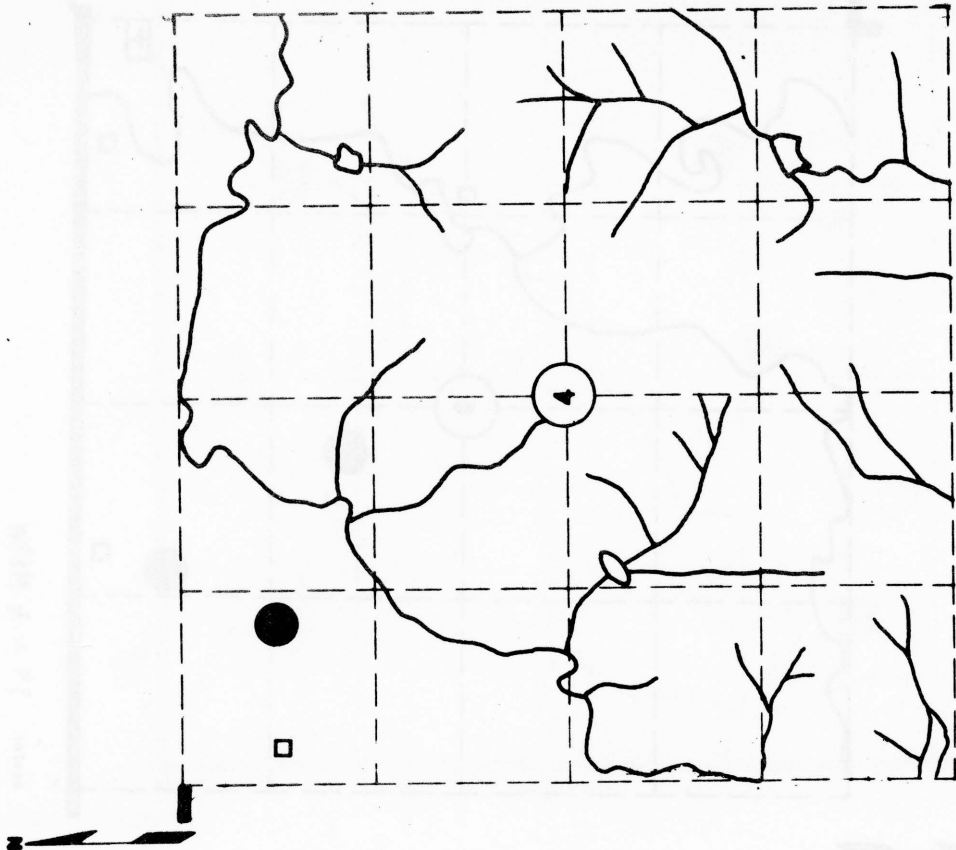
Site No. SG-30 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location NW $\frac{1}{4}$ Sec. 4 Twp. 10S Range 5W
 Owner A. Cerveny name address Minneapolis, KS.
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

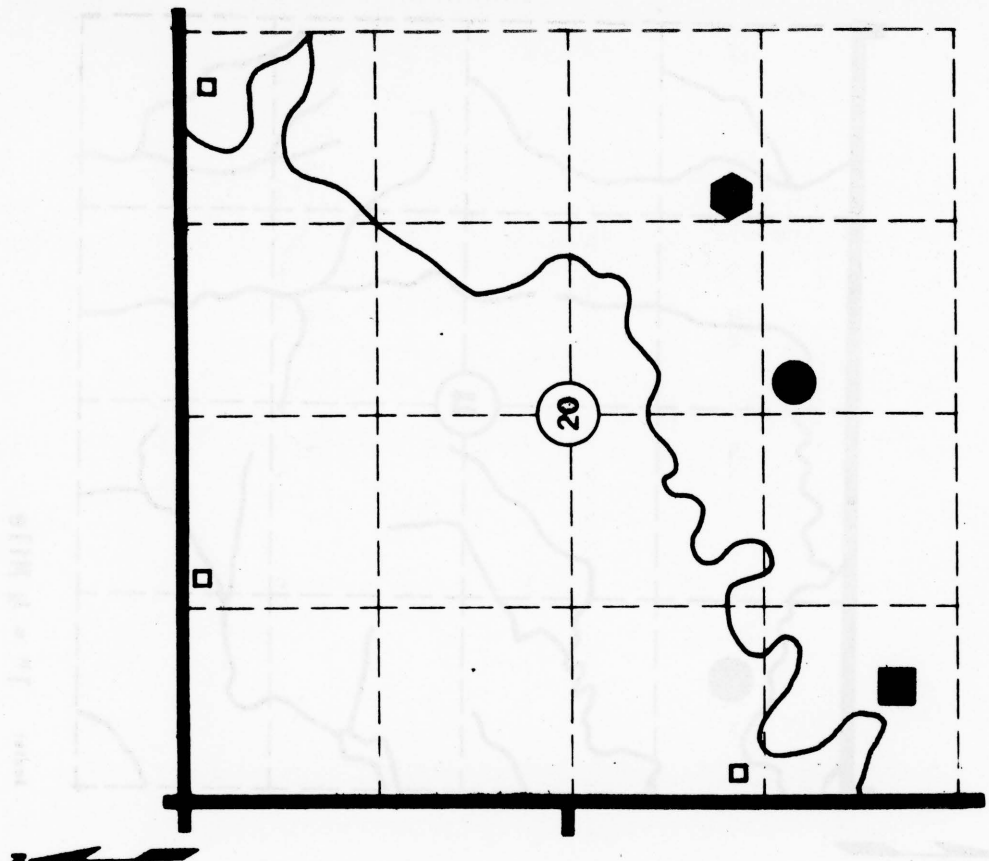
Site No. SS+31 Date August, 1976
Kd
 Material Sandstone County Ottawa
 Location SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 20 Twp. 9S Range 2W
 Owner L. & J. Carson address Miltonvale, KS.
 Nature of Deposit Dry accessibility Good Site Located on Plate II
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Cretaceous
 Geological source Dakota Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Co.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

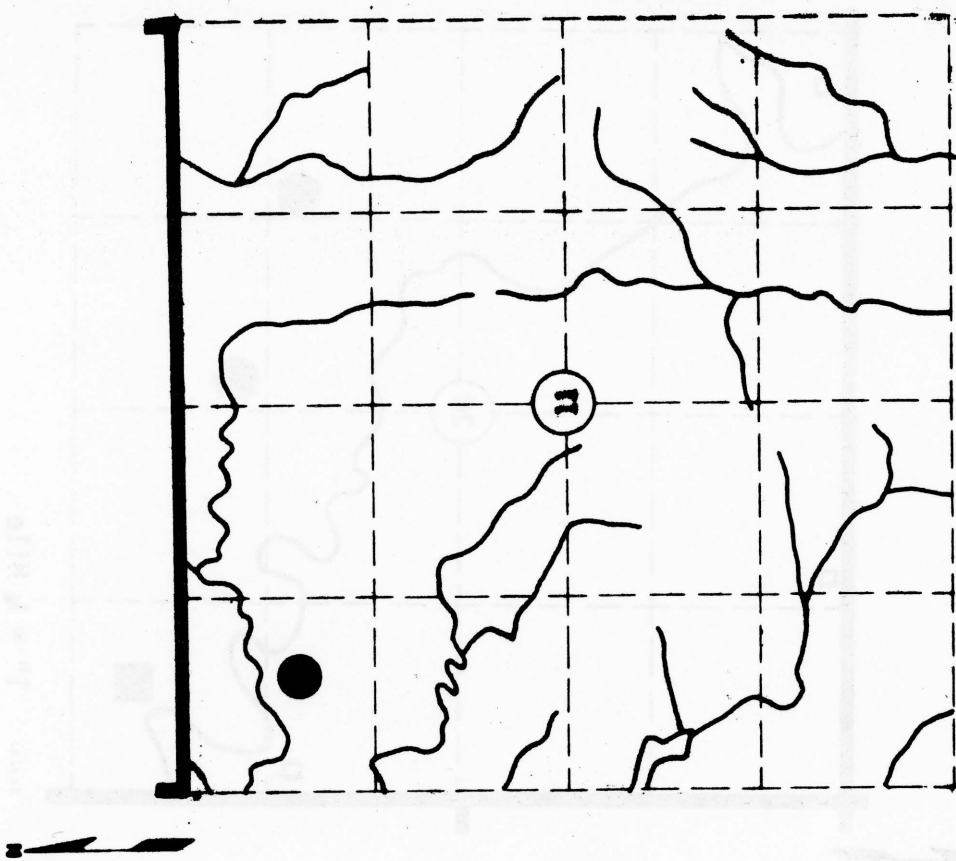
Site No. SG-32 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location NW 1/4 Sec. 11 Twp. 10S Range 3W
 Owner Isabel Reppert 1615 Main St. Terr. Osawatomie, KS.
 Nature of Deposit Dry Accessibility Good Site Located on Plate II
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Cretaceous
 Geological Source Dakota Formation
 Material Similar To _____
 Specific Gravity (sat.) _____ (dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Co.Ft. _____ Str. Ratio _____
 Remarks Abandoned



MATERIAL SITE DATA FORM

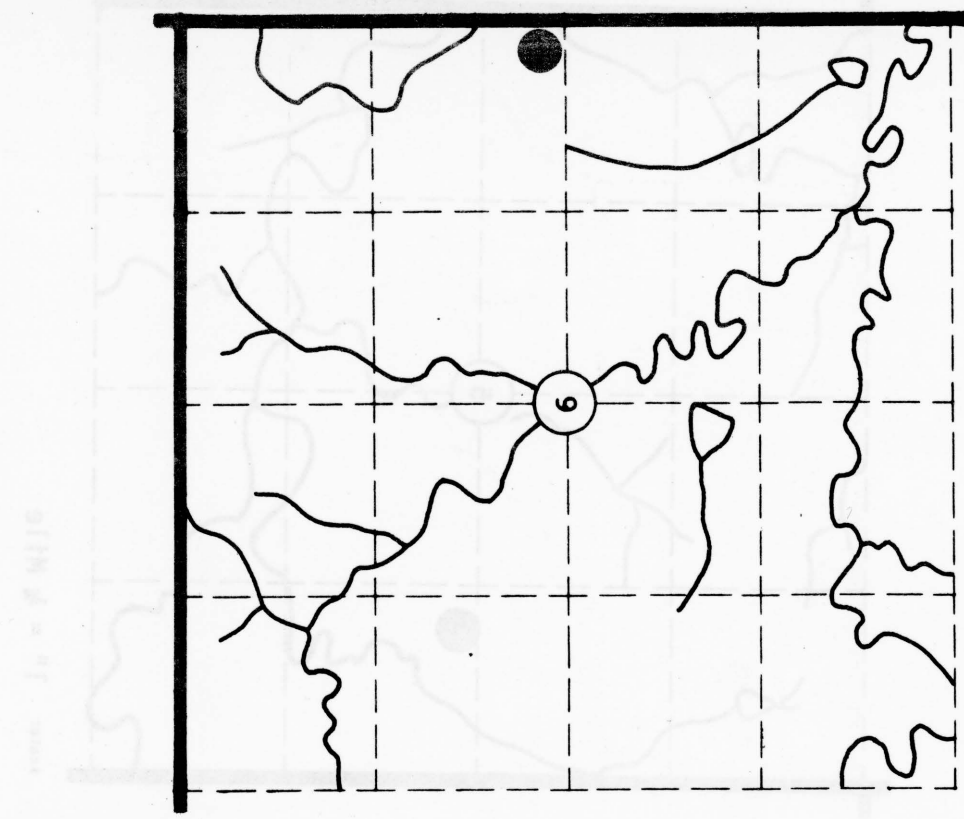
Site No. SG-33 Date August, 1976
Kd
 Material Gravel county Ottawa
 Location NE 1/4 Sec. 6 Twp. 9S Range 1W
 Owner Harry & Keith Catlin Miltonvale, KS.
 name address
 Nature of Deposit Dry accessibility Good Site located on Plate III
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Cretaceous
 Geological Source Dakota Formation
 Material Similar To _____
 Specific Gravity (sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Gr. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

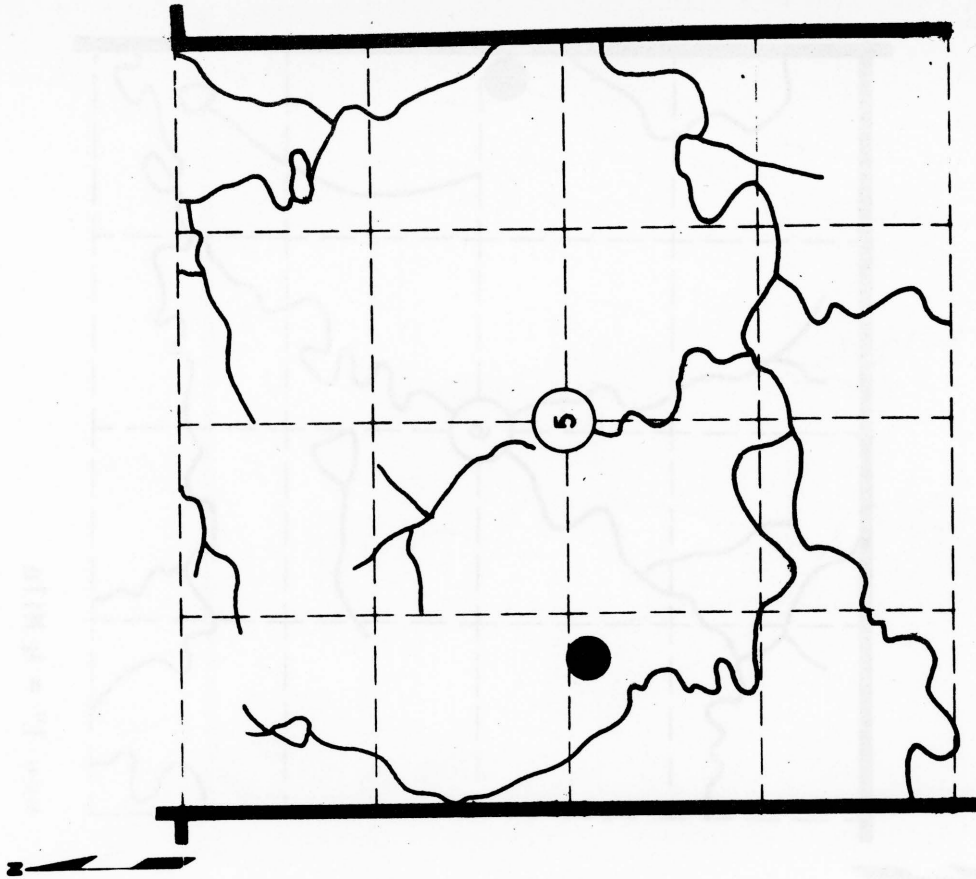
Site No. SG-34 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location SW 1/4 Sec. 5 Twp. 9S Range 1W
 Owner Anton & Richard Soukup Oak Hill, KS
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

Site No. SG-35 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location SW $\frac{1}{4}$ Sec. 15 Twp. 9S Range 1W
 Owner Ernest Lyne Oak Hill, KS.
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Not Sampled

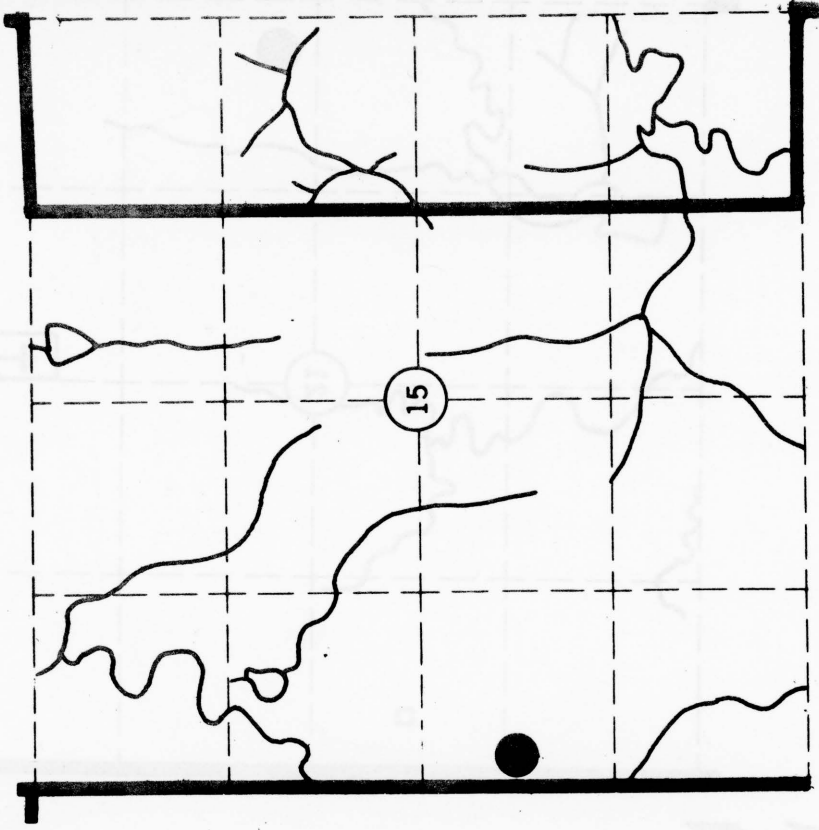
EXPLORATION DATA

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

CORRELATION DATA

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

Scale: 1" = 1/4 Mile



MATERIAL SITE DATA FORM

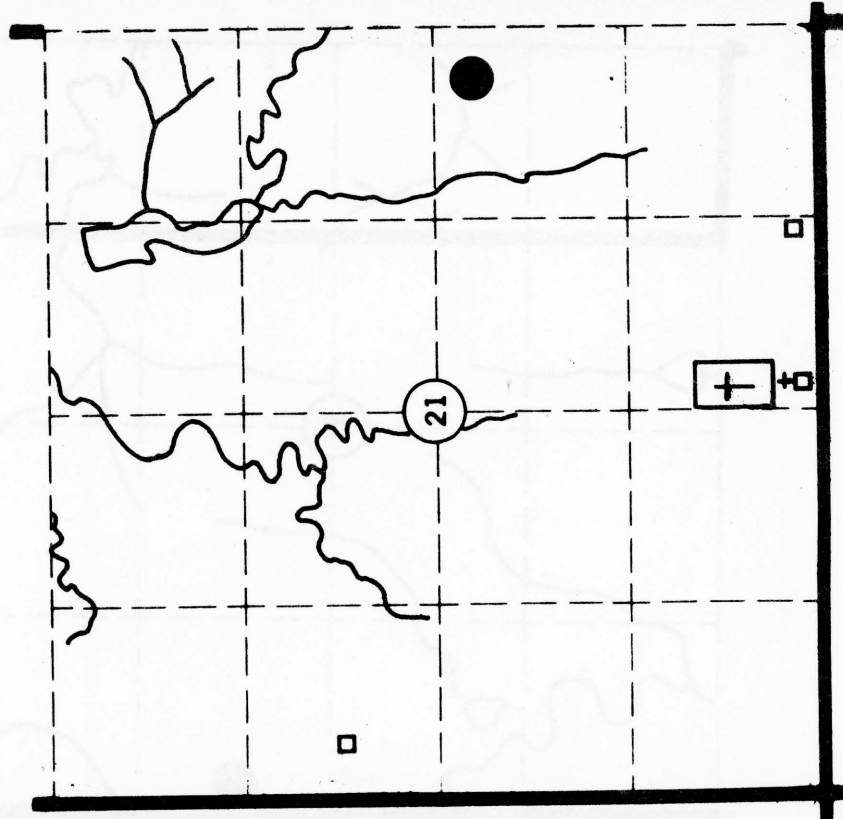
Site No. SG-36 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location SE 1/4 Sec. 21 Twp. 9S Range 1W
 Owner Albert Vanek Oak Hill, KS
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Not Sampled

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 Cretaceous
 Geological Source Dakota Formation
 Material Similar To _____
 Specific Gravity (sat.) _____ (dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SITE DATA FORM

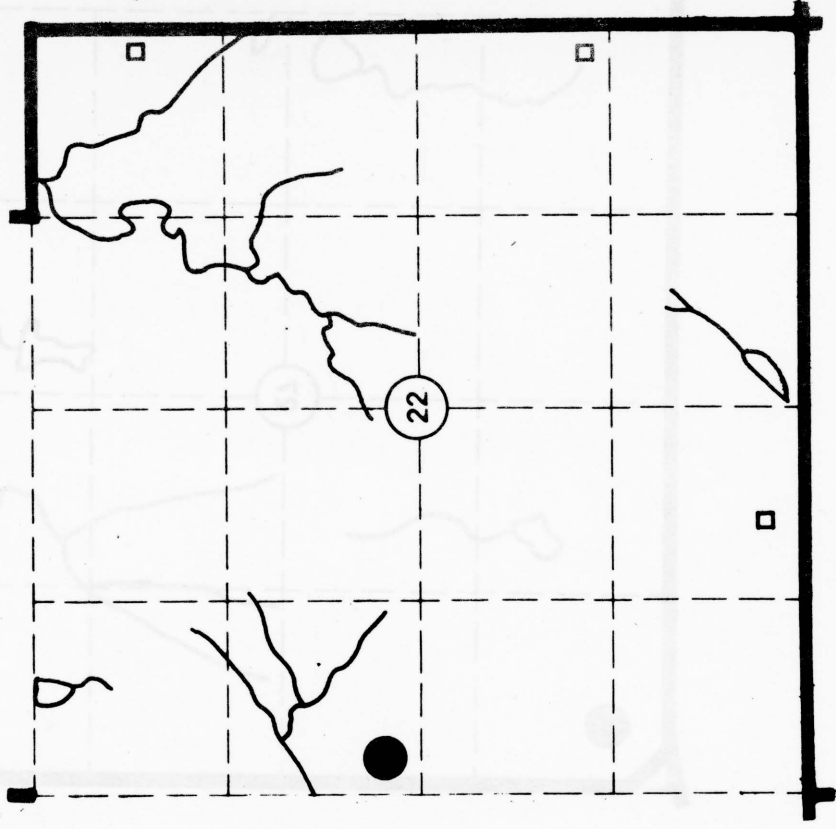
Site No. SG-37 Date August, 1976
Kd County Ottawa
 Material Gravel
 Location NW 1/4 Sec. 22 Twp. 9S Range 1W
A.R. Reed 1015 12th Clay Center, KS.
 Owner name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Not Sampled

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 Cretaceous
 Geological Source Dakota Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Co.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

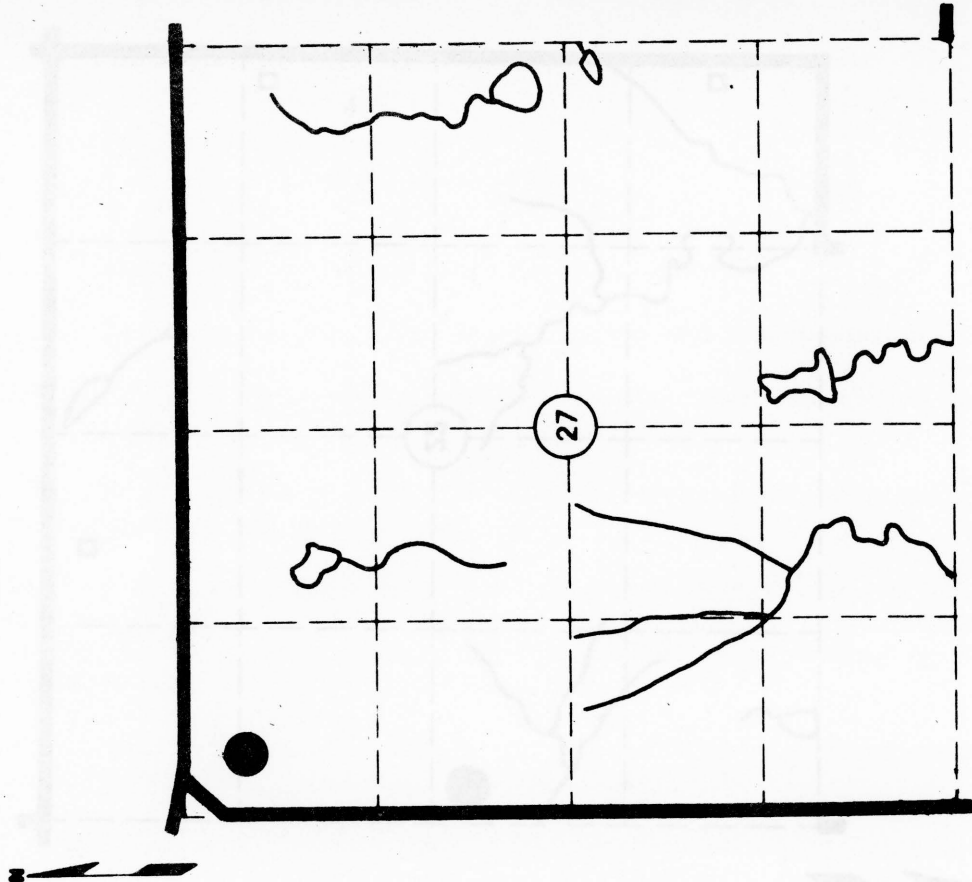
Site No. SG-38 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location NW 1/4 Sec. 27 Twp. 9S Range 2W
 Owner Frank Willard address Miltonvale, KS.
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Not Sampled

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 Cretaceous
 Geological Source Dakota Formation
 Material Similar To _____
 Specific Gravity (Set.) _____ (Dry)
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

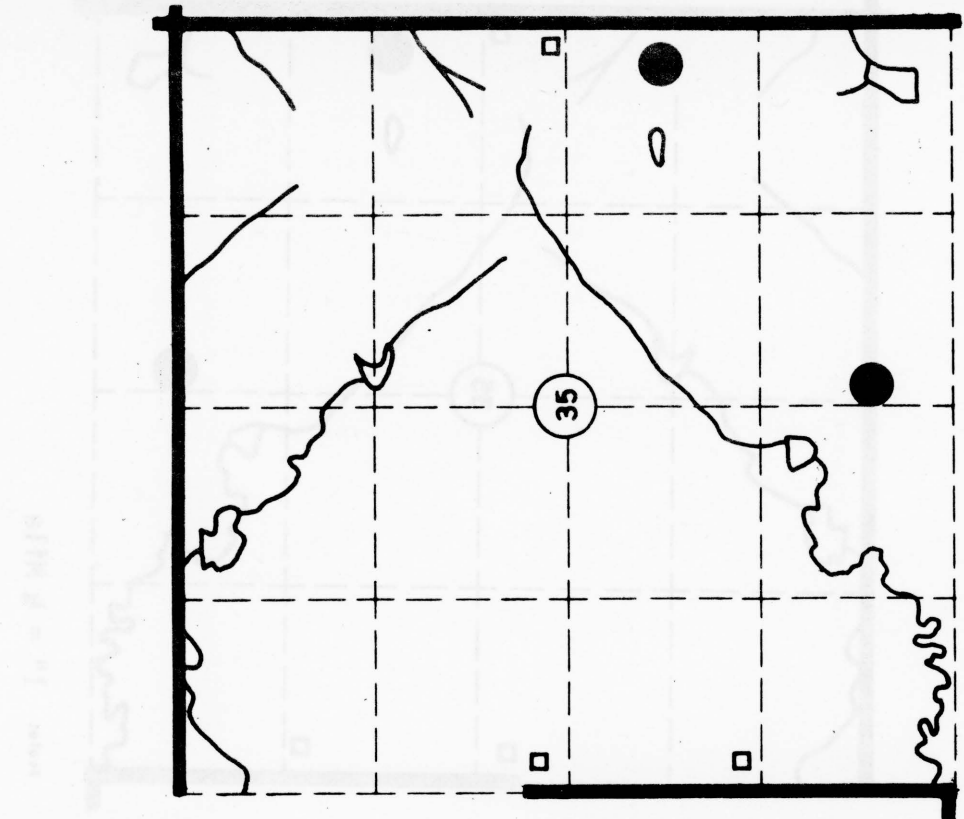
Site No. SG-39 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location SW 1/4 SE 1/4 Sec. 35 Twp. 9S Range 2W
 Owner Aileen Fuller 730 Osage Manhattan, KS.
 address
 Nature of Deposit Dry accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at bottom of hole	Depth of overburden	Depth of Material	Percent Retained						Wash 200	G.F.	L.L.	P.I.	
				1 1/2	3/4	3/8	1/4	16	30					50

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

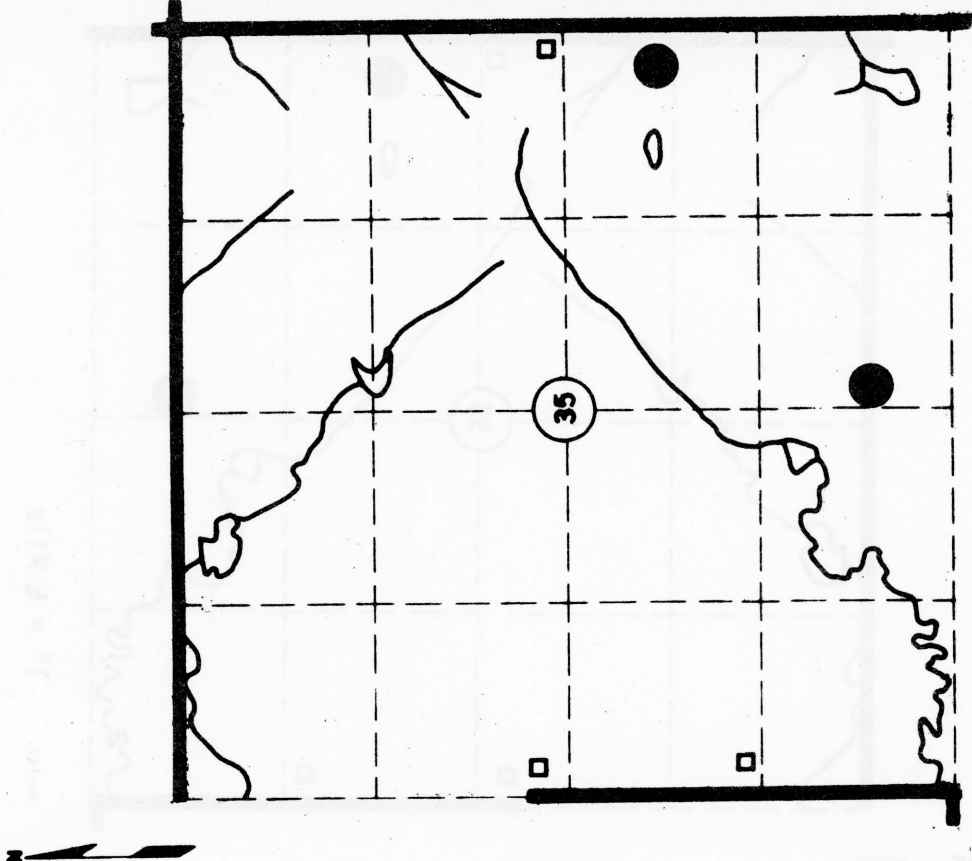
Site No. SG-40 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location NE 1/4 SE 1/4 Sec. 35 Twp. 9S Range 2W
 Owner Aileen Fuller 730 Osage Manhattan, KS.
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Cretaceous
 Geological Source Dakota Formation
 Material Similar To _____
 Specific Gravity (sat.) _____ (dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

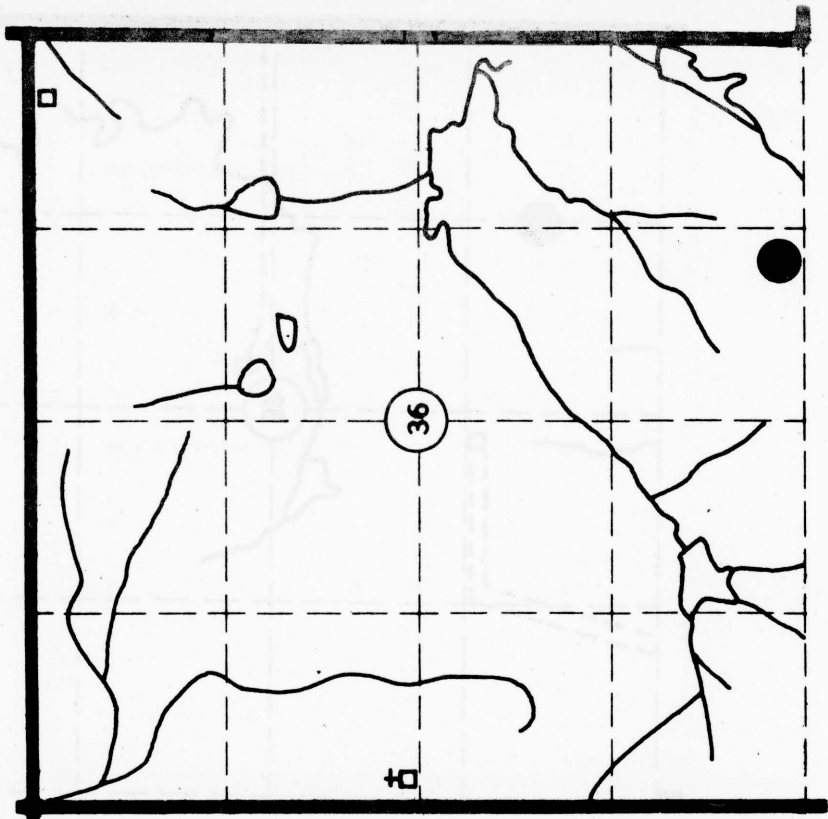
Site No. SG-41 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location SE 1/4 Sec. 36 Twp. 9S Range 2W
 Owner C.Y. Vesterberg Wells, KS.
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Not Sampled

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	4	8	16					30	50

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

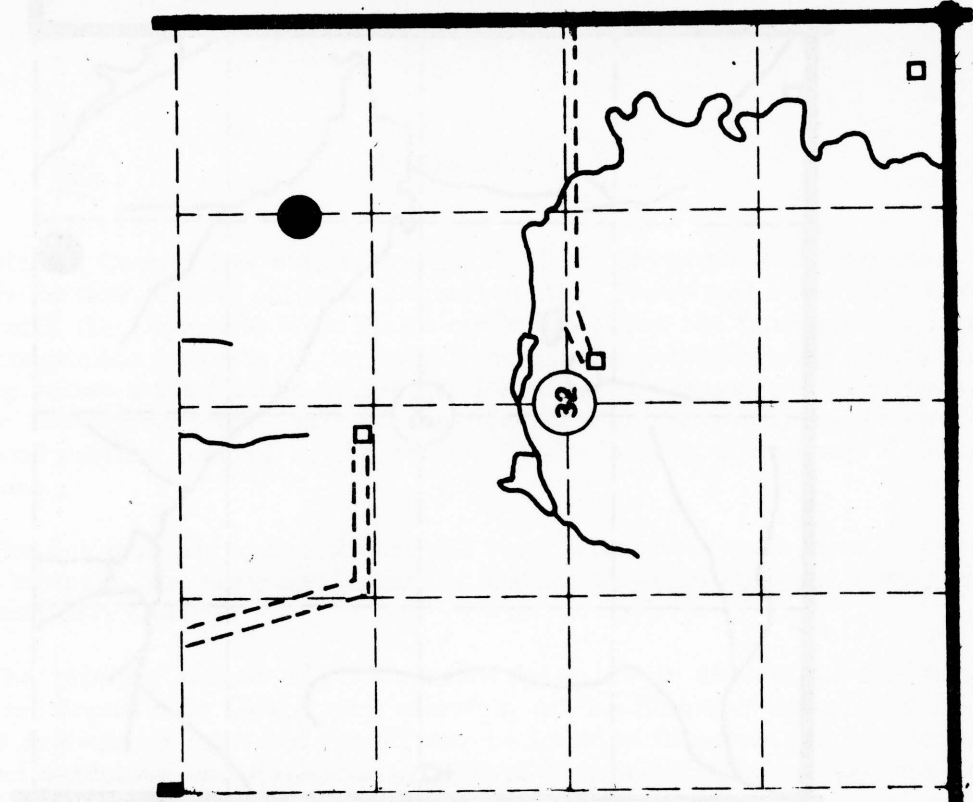
Site No. SG-42 Date August, 1976
Material Gravel County Ottawa
Location NE 1/4 Sec. 32 Twp. 9S Range 1W
Owner C. Y. Vesterburg Route 1 Wells, Kansas
Nature of Deposit Dry Accessibility Good Site Located on Plate III
Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

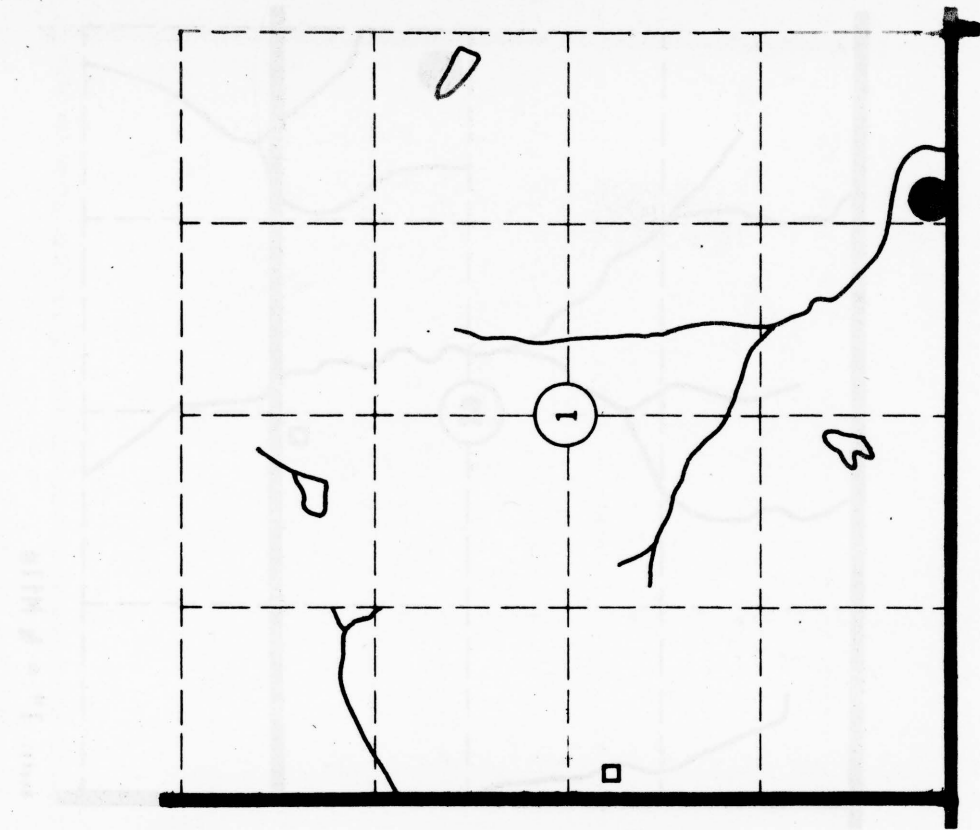
Site No. SG-43 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location SE 1/4 Sec. 1 Twp. 10S Range 2W
 Owner Hazel McIntosh Oak Hill, Kansas
 Name
 Nature of Deposit Dry Accessibility Good Site Located on Plate III
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Material	Percent Retained					Wash 200	S.F.	L.L.	P.I.
			1 1/2	3/4	3/8	4	8				

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

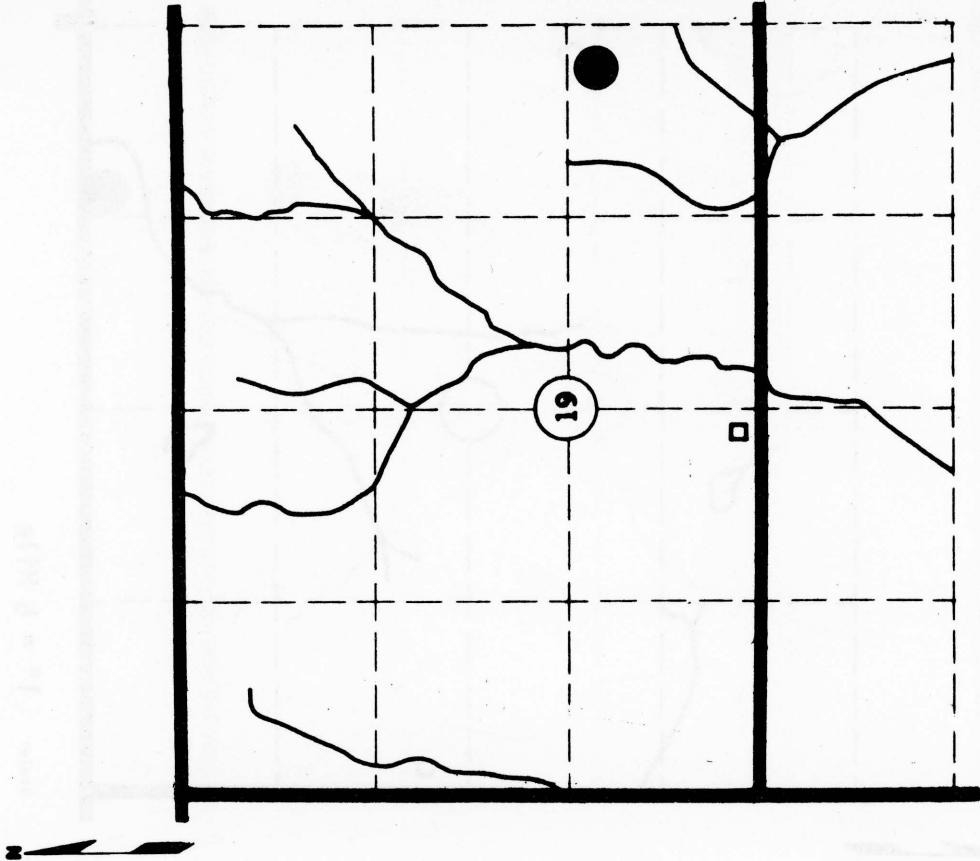
Site No. SG-44 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location SE 1/4 Sec. 19 Twp. 10S Range 5W
 Owner Roy Hauck name address Ada, Kansas
 Nature of Deposit Dry Accessibility Fair Site Located on Plate IV
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

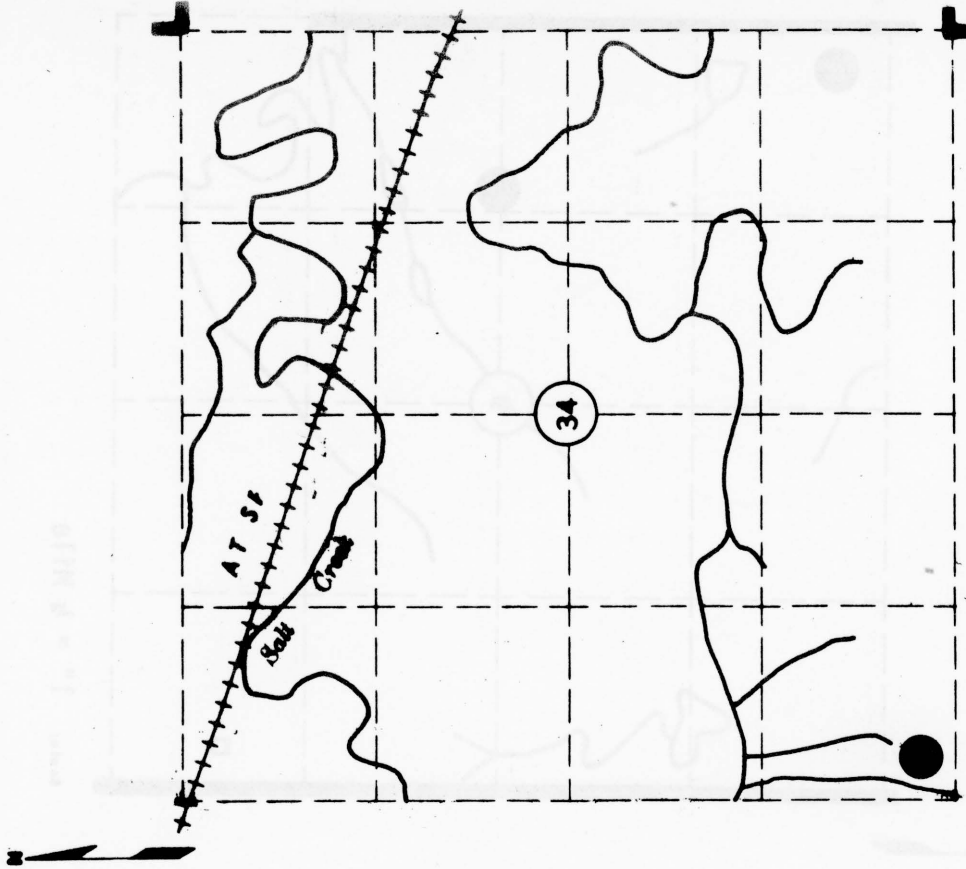
Site No. SG-45
Qtn
 Date August, 1976
 Material Sand & Gravel County Ottawa
 Location SW $\frac{1}{4}$ Sec. 34 Twp. 10S Range 5W
 Owner L. V. Baccus name Salina, Kansas address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

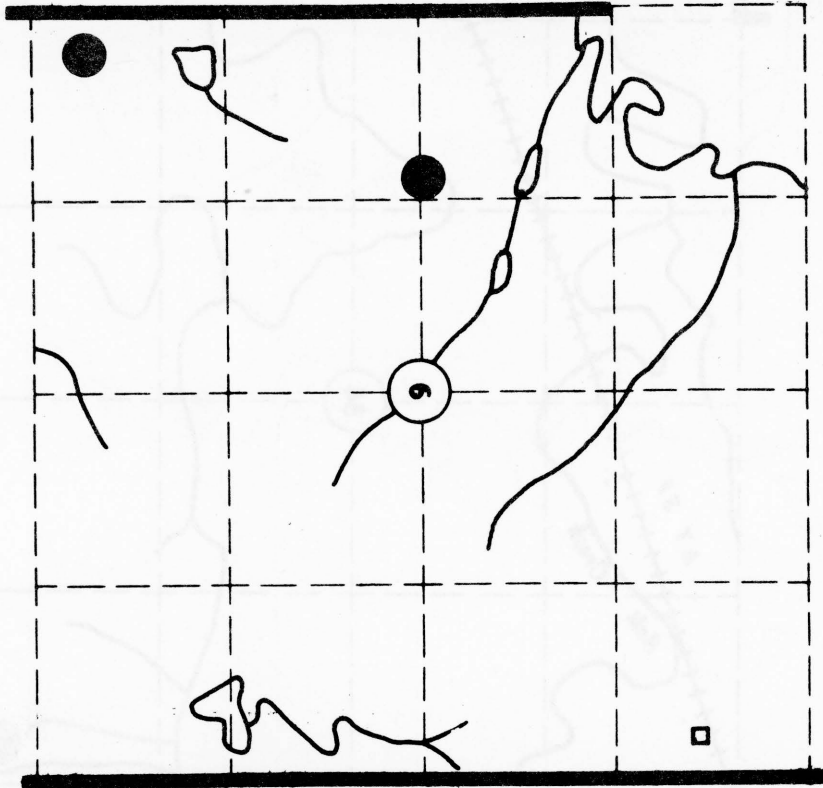
Site No. SG-46 Date August, 1976
Qtn
 Material Sand & Gravel County Ottawa
 Location NE 1/4 Sec. 9 Twp. 11S Range 5W
 Owner Edgar Bremerman Route 1 Minneapolis, Kansas
 address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

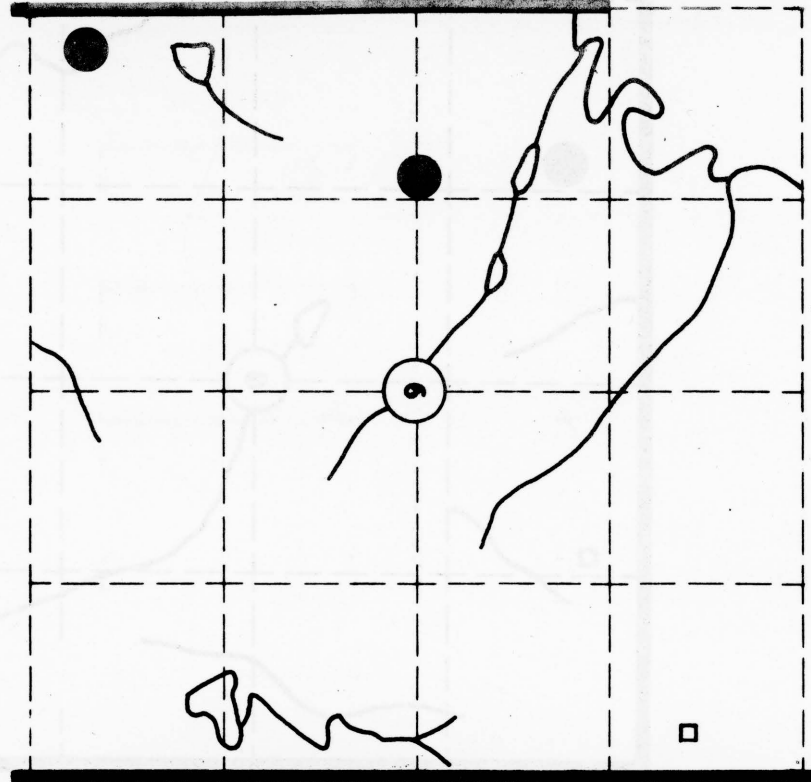
Site No. SG-47 Date Qtn August, 1976
 Material Sand & Gravel County Ottawa
 Location NE 1/4 Sec. 9 Twp. 11S Range 5W
 Owner Edgar Bremerman Route 1 Minneapolis, Kansas
 name address
 Nature of Deposit Dry accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	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 Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Co. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

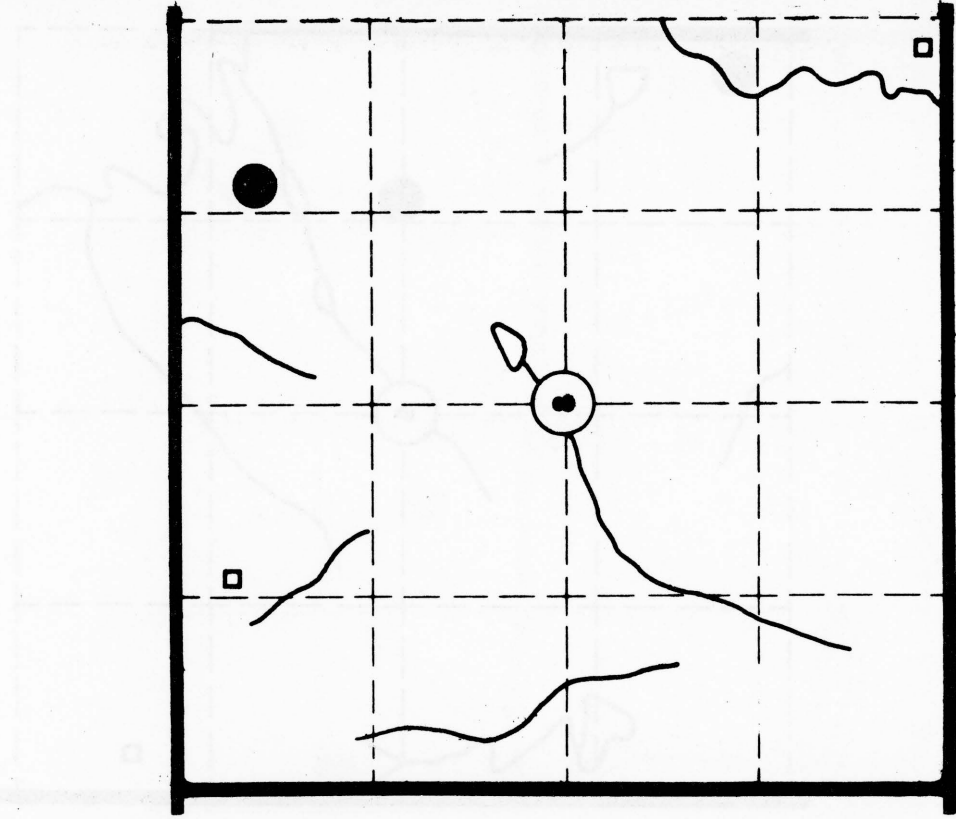
Site No. SG-48 Date August, 1976
Qtn
 Material Sand & Gravel County Ottawa
 Location NE 1/4 Sec. 8 Twp. 11S Range 4W
 Owner L. V. Baccus Salina, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

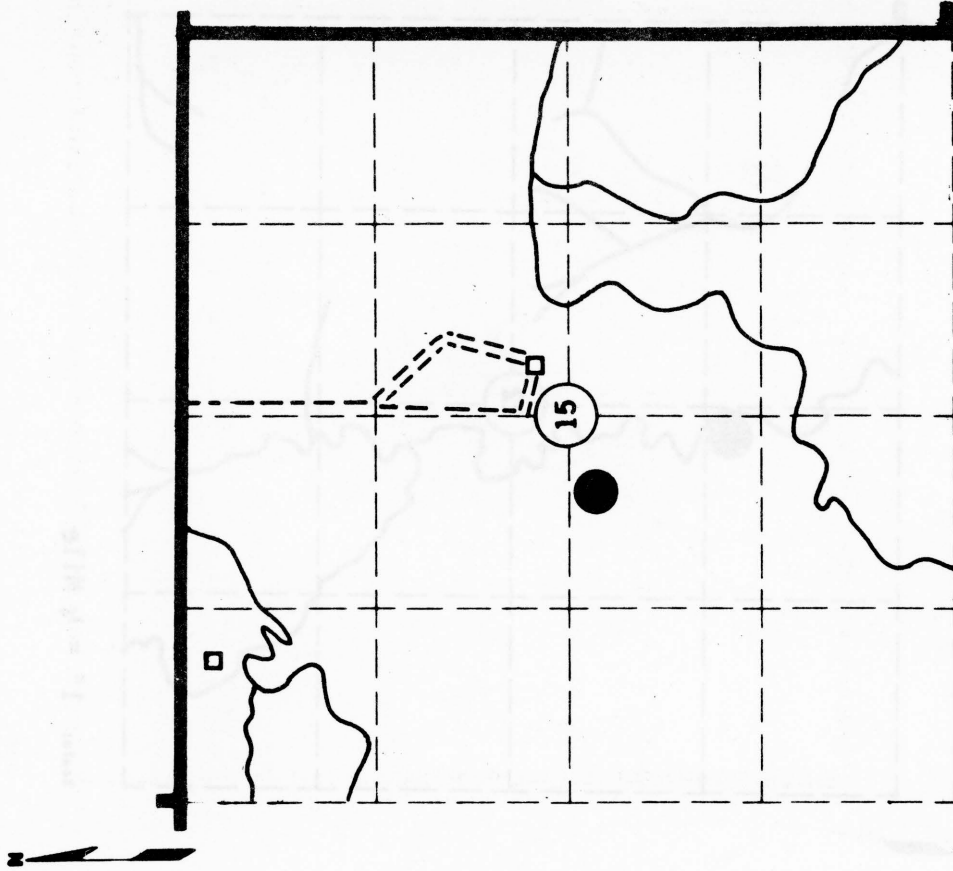
Site No. SG-49 Date August, 1976
 Material Sand & Gravel County Ottawa
 Location SW 1/4 Sec. 15 Twp. 11S Range 4W
 Owner Darrell Ray Myers Route 1 Minneapolis, Kansas
 Nature of Deposit Dry Accessibility Good Site Located on Plate IV
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

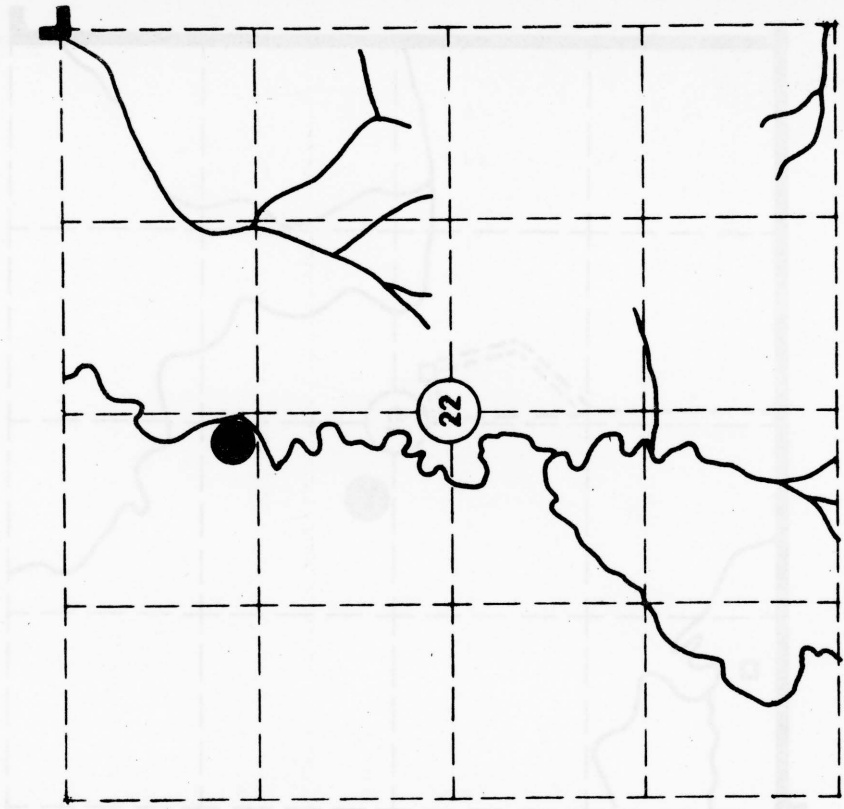
Site No. SG-50 Date August, 1976
Qtn
 Material Sand & Gravel County Ottawa
 Location NW 1/4 Sec. 22 Twp. 11S Range 4W
 Owner Herman Rarig Minneapolis, Kansas
 name address
 Nature of Deposit Dry Accessibility Fair Site Located on Plate IV
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of overburden	Depth of Material	Percent Retained					Wash 200	S.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8				

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

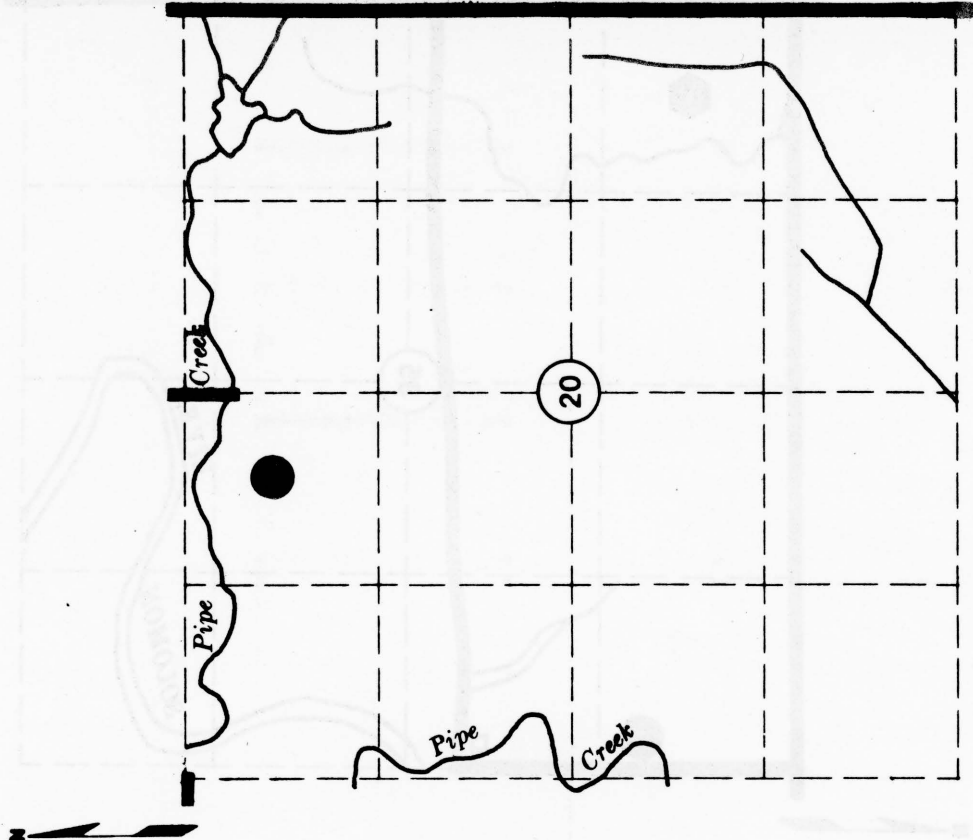
Site No. SG-51 Date August, 1976
Qtn
 Material Sand & Gravel County Ottawa
 Location NW 1/4 Sec. 20 Twp. 10S Range 3W
 Owner John W. Bishop 517 E. 2nd Minneapolis, Kansas
 Nature of Deposit Dry Accessibility Good Site Located on Plate V
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

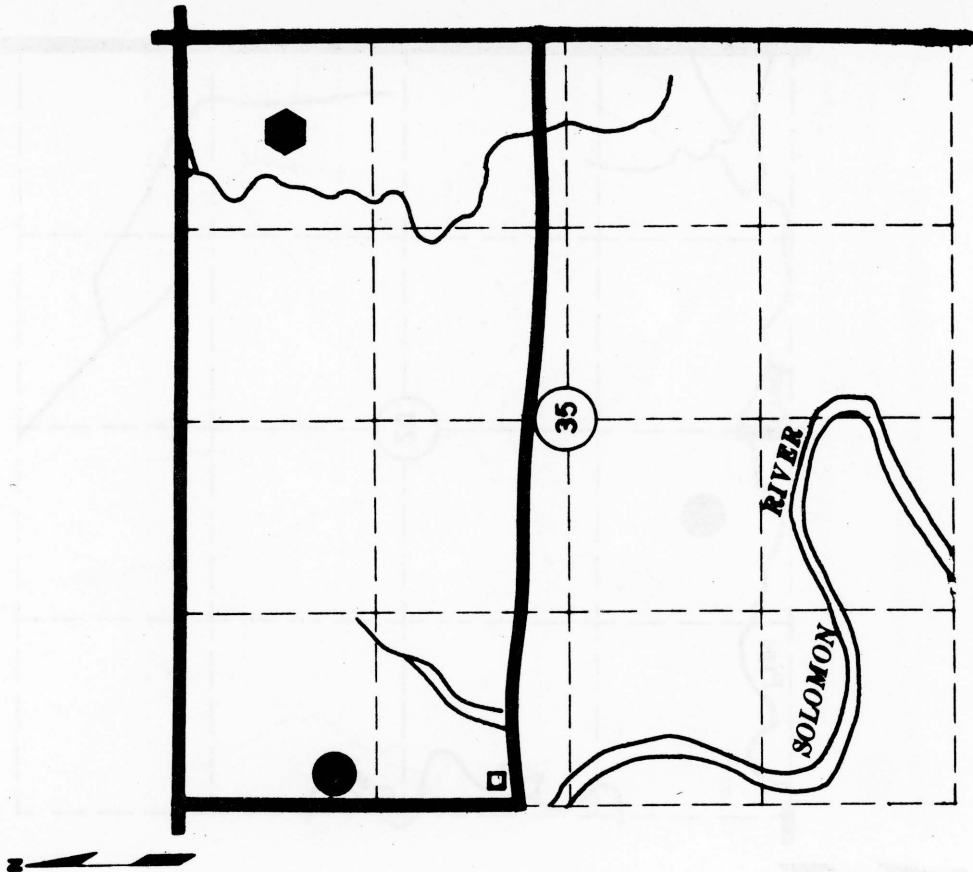
Site No. SG-52 Date August, 1976
Oti
 Material Sand & Gravel County Ottawa
 Location NW 1/4 Sec. 35 Twp. 10S Range 4W
 Owner Dale & Clayton Geisen Minneapolis, Kansas
 address
 Nature of Deposit Dry Accessibility Good Site Located on Plate V
 Status of Site Open Materials Site; Not Sampled

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	1	16	30	50	100						

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

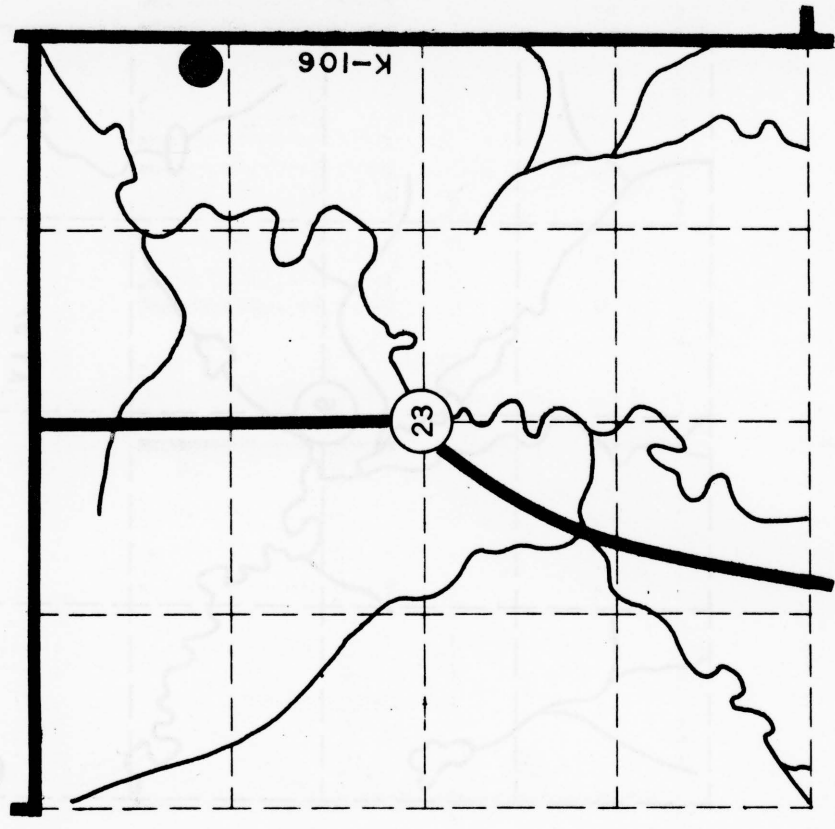
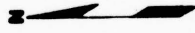
Site No. SG-53
Qtn
 Date August, 1976
 Material Gravel
 County Ottawa
 Location NE 1/4 Sec. 23 Twp. 11S Range 4W
 Owner J. N. McMichael Box 738 Liberal, Kansas
 address
 Nature of Deposit Dry Accessibility Good Site Located on Plate V
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

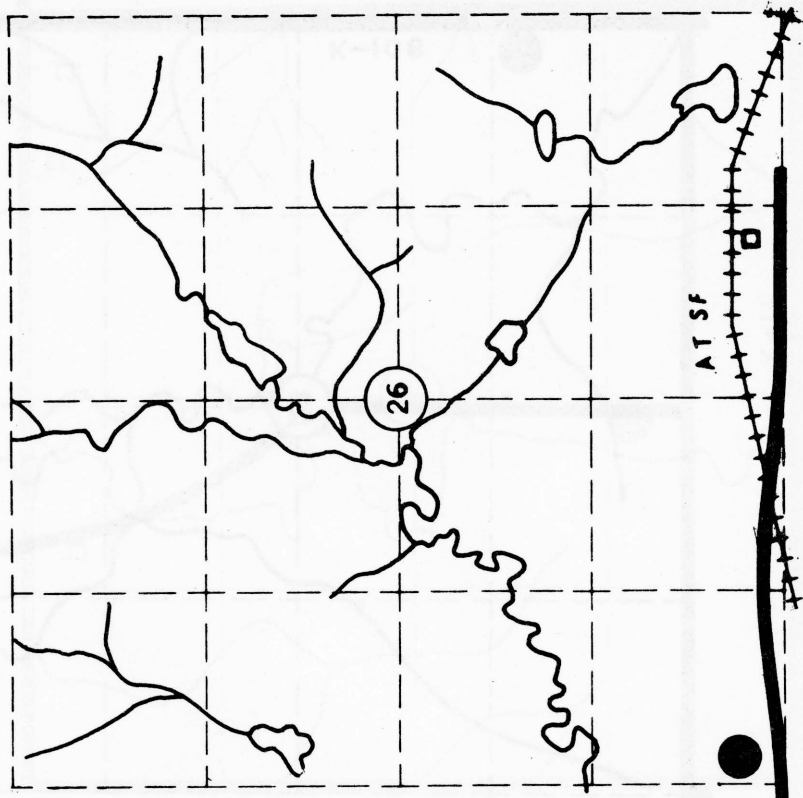
Site No. SG-54 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location SW 1/4 Sec. 26 Twp. 10S Range 2W
 Owner Lloyd Nichols Longford, Kansas
 Nature of Deposit Dry Accessibility Good Site Located on Plate VI
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

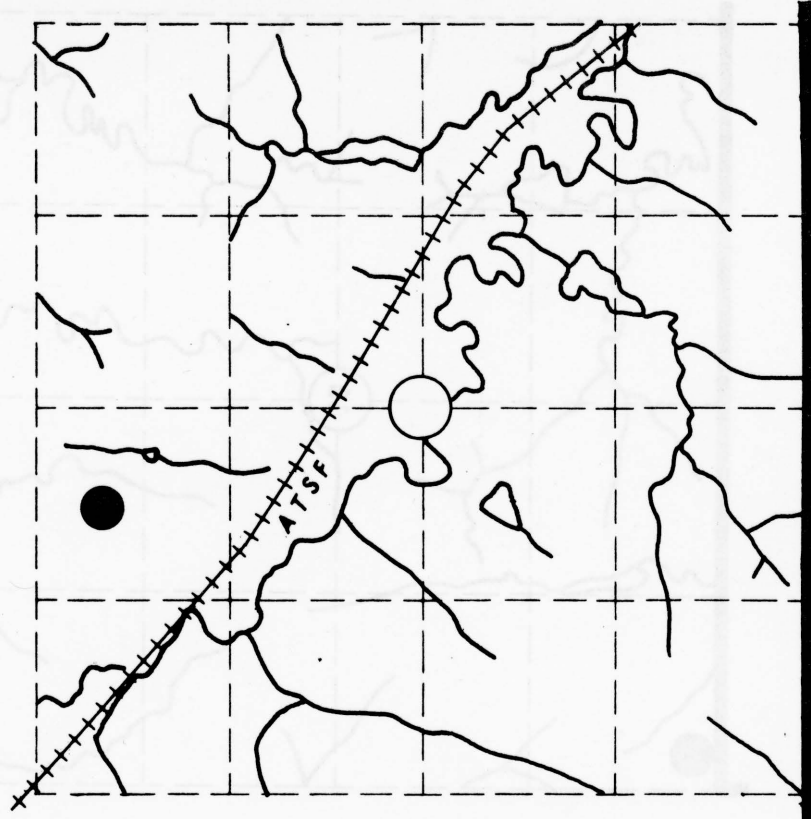
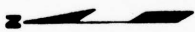
Site No. SG-55 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location NW $\frac{1}{4}$ Sec. 36 Twp. 10S Range 2W
 Owner Theodore Kobetich Manchester, Kansas
name address
 Nature of Deposit Dry accessibility Fair Site Located on Plate VI
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

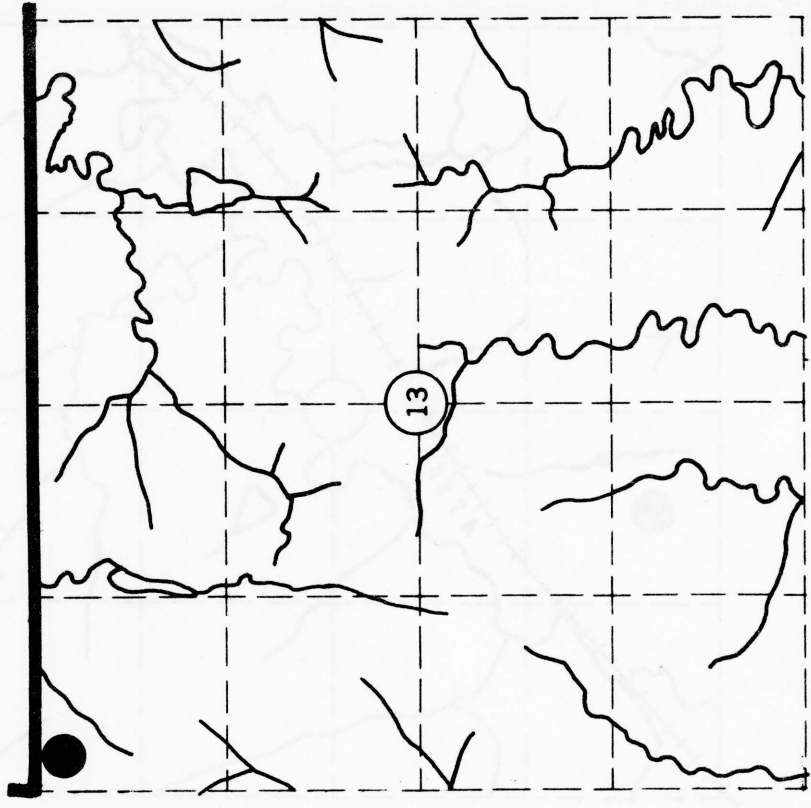
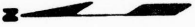
Site No. SG-56 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location NW $\frac{1}{4}$ Sec. 13 Twp. 11S Range 1W
 Owner E. Chromister 123 NE 7th Abilene, Kansas
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VI
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

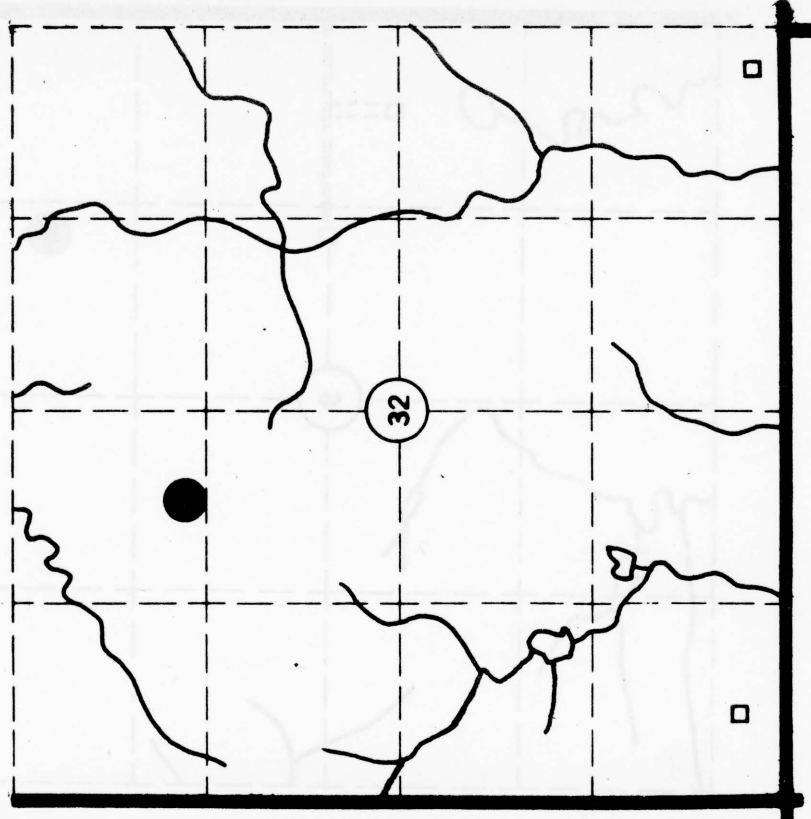
Site No. SG-57 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location NW $\frac{1}{4}$ Sec. 32 Twp. 11S Range 4W
 Owner Diedrick Farms Culver, Kansas
name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	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 Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To _____
 Specific Gravity (sat.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

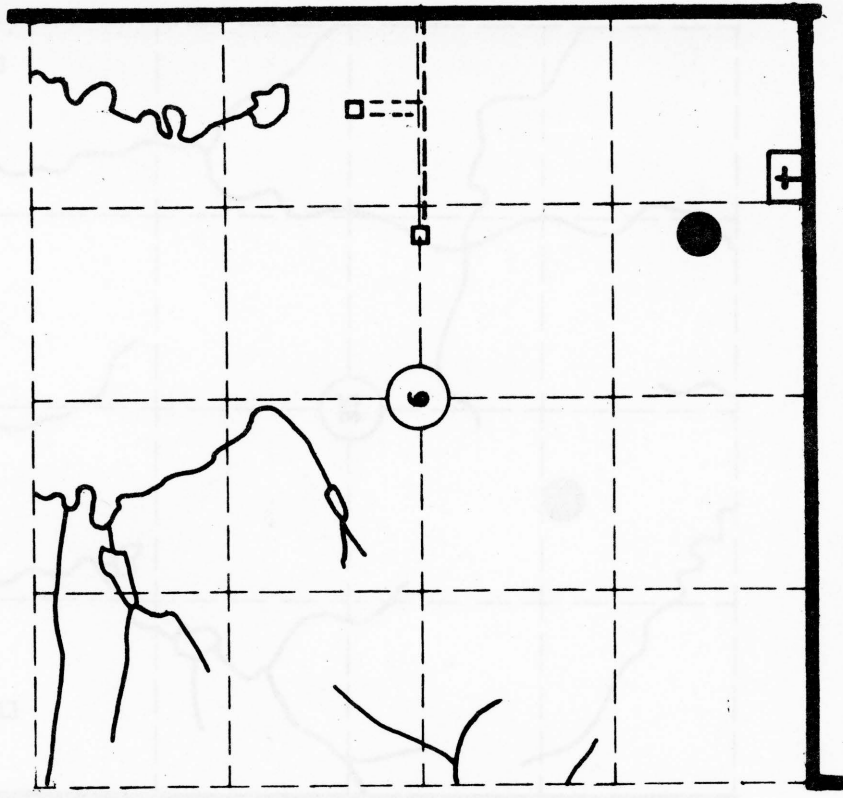
Site No. SG-58 Date August, 1976
 Material Qtn County Ottawa
 Location SE 1/4 Sec. 6 Twp. 12S Range 5W
 Owner Thomas Weathered Tescott, Kansas
 Nature of Deposit Dry accessibility Good Site located on Plate VII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of overburden	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					50	100

CORRELATION DATA

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



MATERIAL SITE DATA FORM

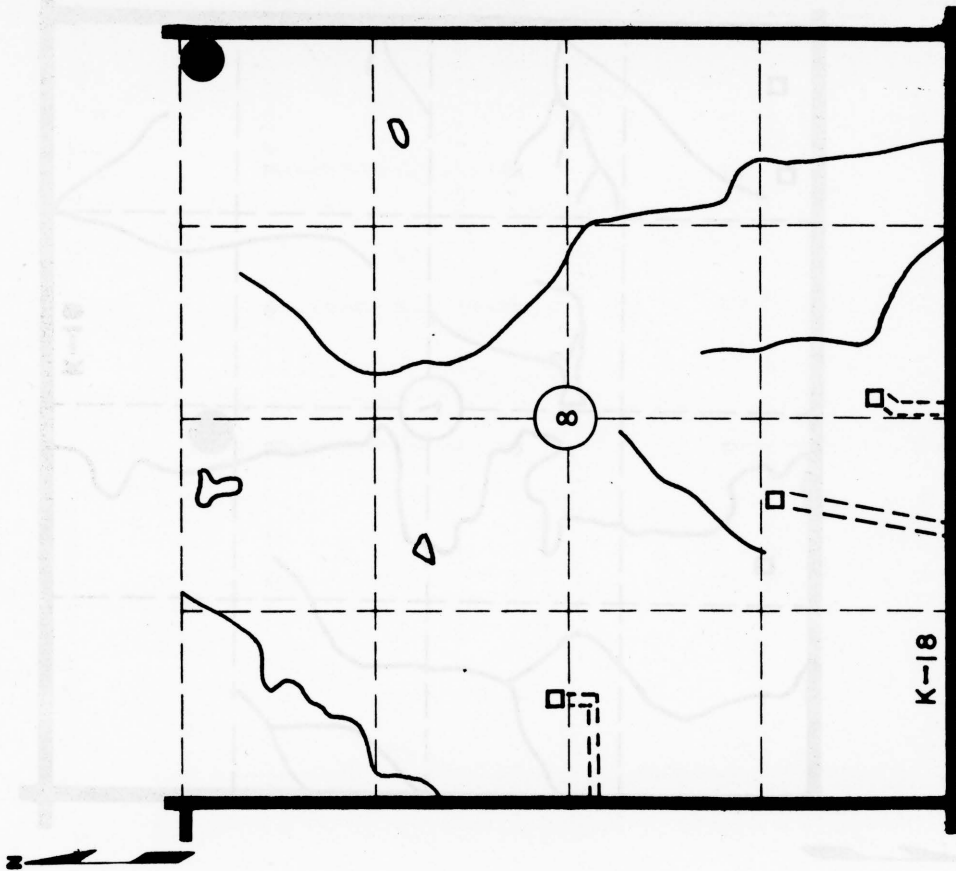
Site No. SG-59
Qtn Date August, 1976
 Material Gravel County Ottawa
 Location NE 1/4 Sec. 8 Twp. 12S Range 5W
 Owner Hall Berkley Tescott, Kansas
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

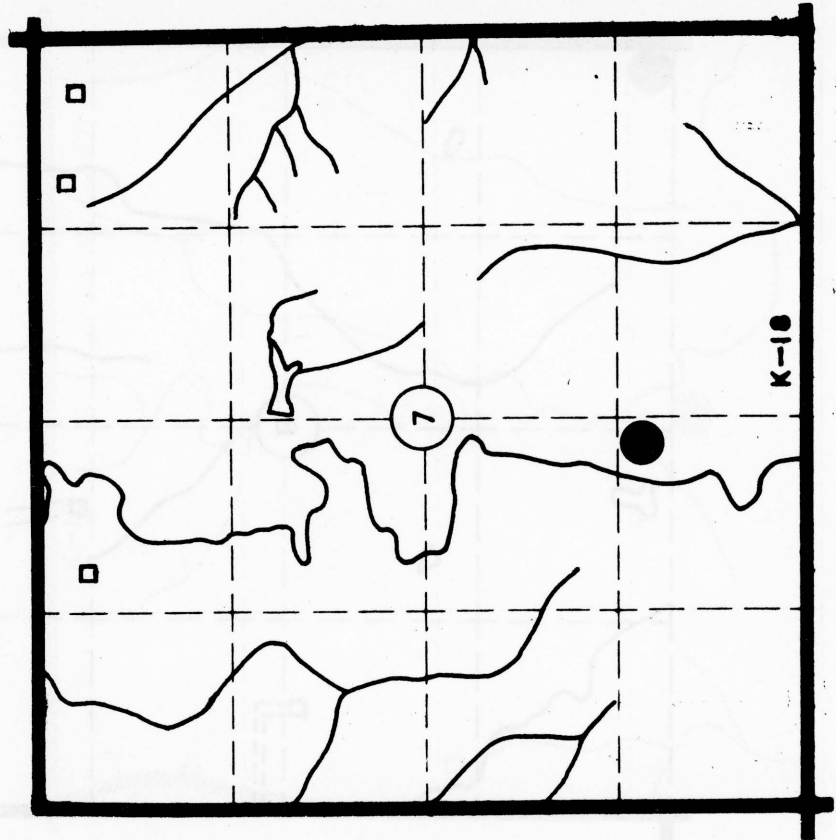
Site No. SG-60 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location SW 1/4 Sec. 7 Twp. 12S Range 4W
 Owner A. L. Perry ^{name} Tescott, Kansas
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	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 Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To _____
 Specific Gravity (Set.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Mt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

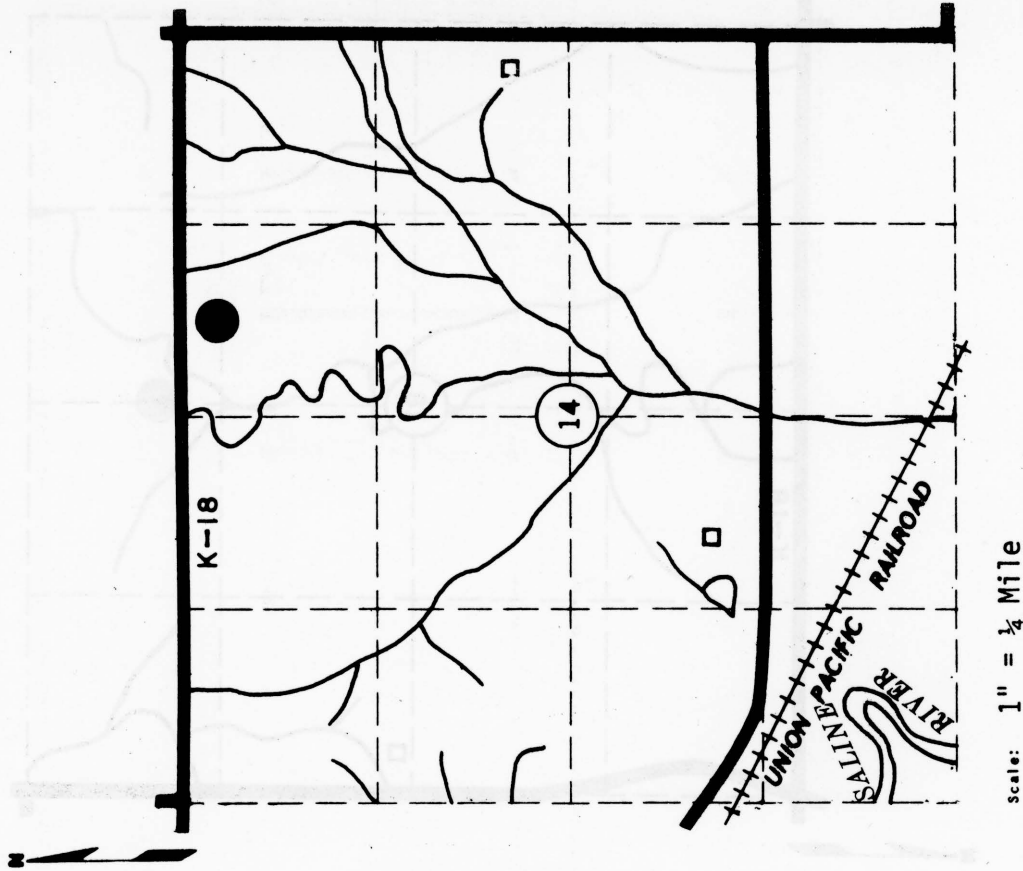
Site No. SG-61
Qtn
 Date August, 1976
 Material Gravel County Ottawa
 Location NE 1/4 Sec. 14 Twp. 12S Range 5W
 Owner Luther Lee Tescott, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

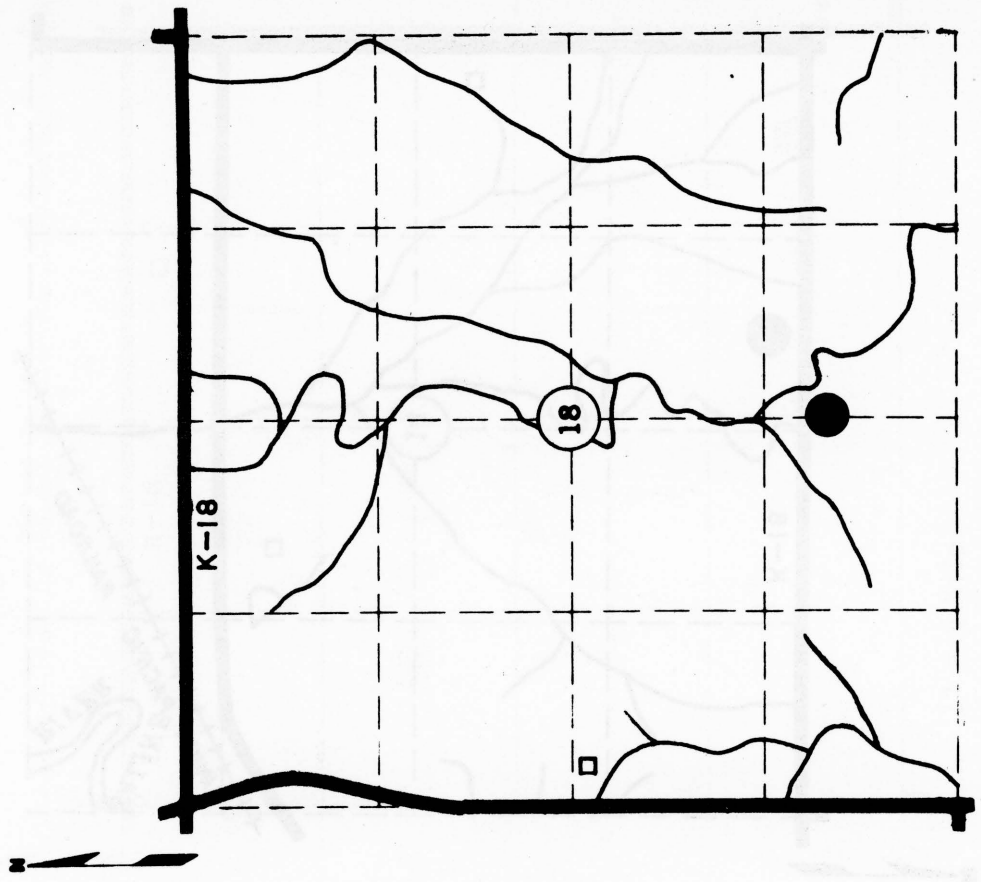
Site No. SG-62 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location 5 1/2 Sec. 18 Twp. 12S Range 4W
 Owner Merle Kepple Route Culver, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

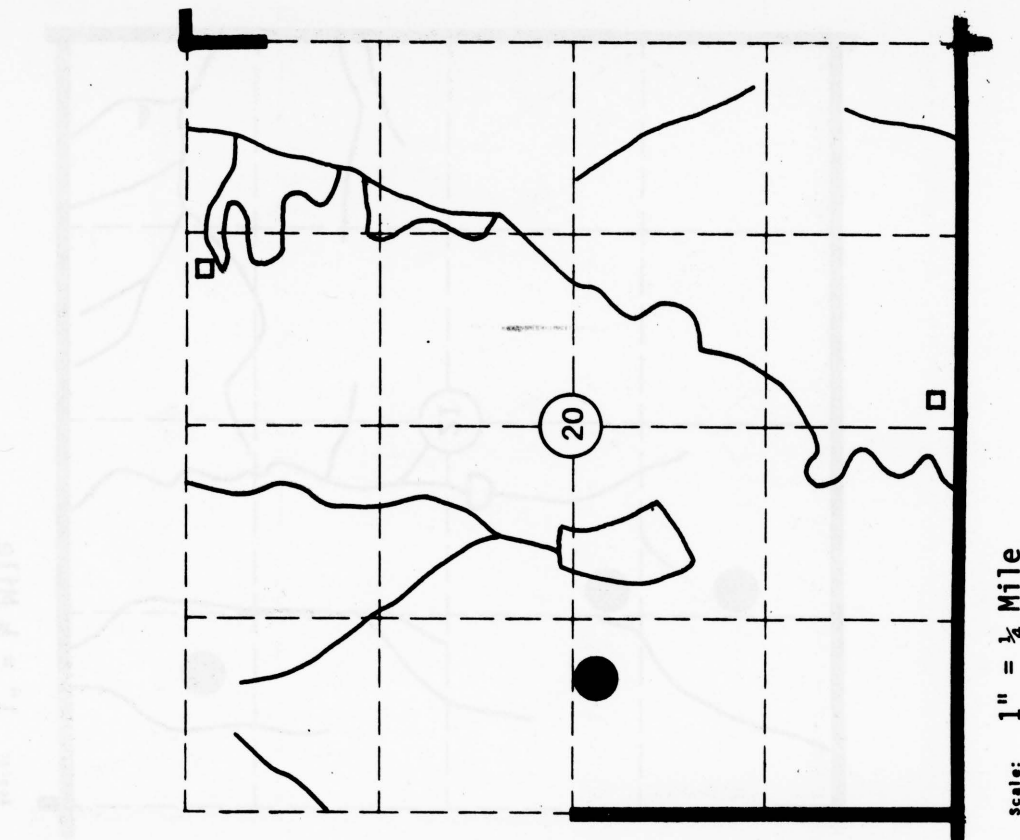
Site No. SG-63
Qtn
 Date August, 1976
 Material Gravel County Ottawa
 Location SW¹/₄ Sec. 20 Twp. 12S Range 4W
 Owner Matthews & Berkley, et al Tescott, Kansas
 address
 Nature of Deposit Dry Accessibility Fair Site Located on Plate VII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Co. ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

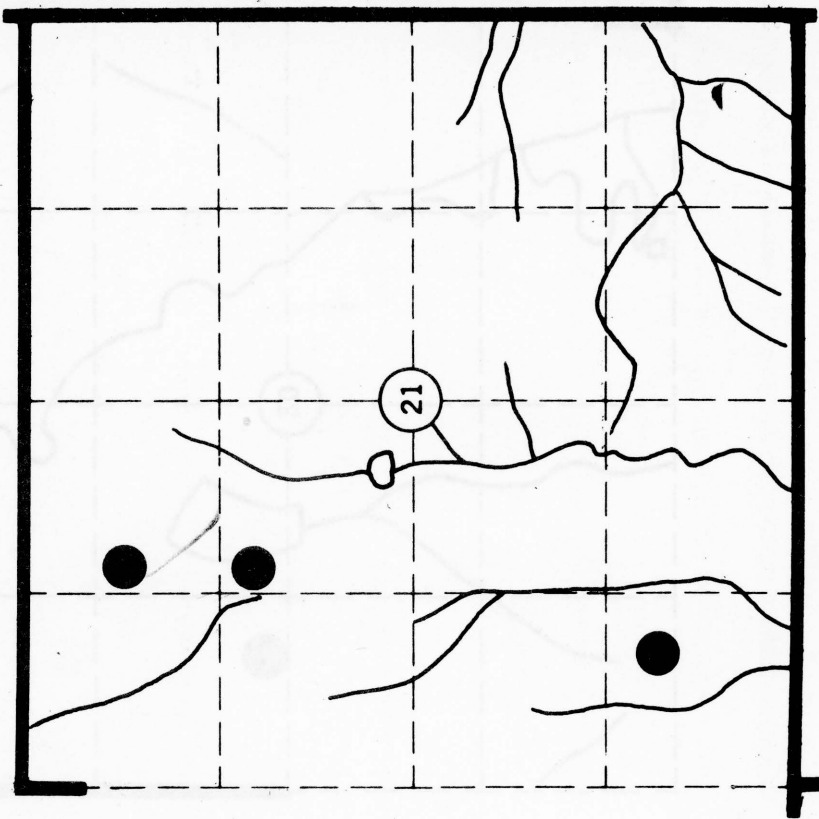
Site No. SG-64 Date August, 1976
Qtn County Ottawa
 Material Gravel
 Location NW 1/4 Sec. 21 Twp. 12S Range 4W
 Owner Anna Breneman Culver, Kansas
 Name Address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/2 Mile

MATERIAL SITE DATA FORM

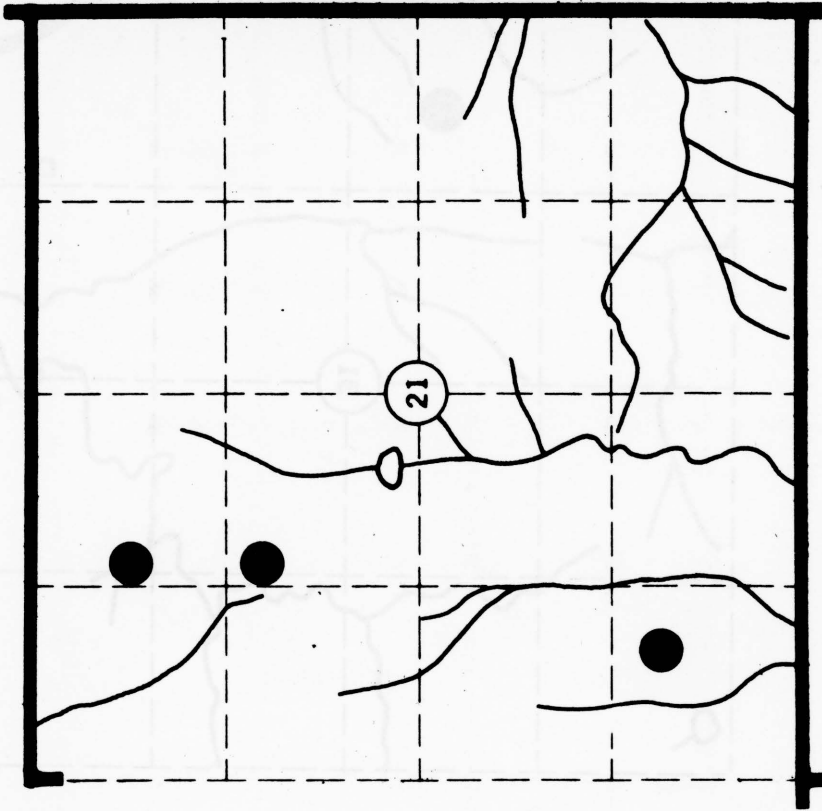
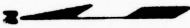
Site No. SG-65 Date August, 1976
QIn County Ottawa
 Material Gravel
 Location SW $\frac{1}{4}$ Sec. 21 Twp. 12S Range 4W
 Owner R. E. Cobb 1729 Greely Salina, Kansas
 Name Address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

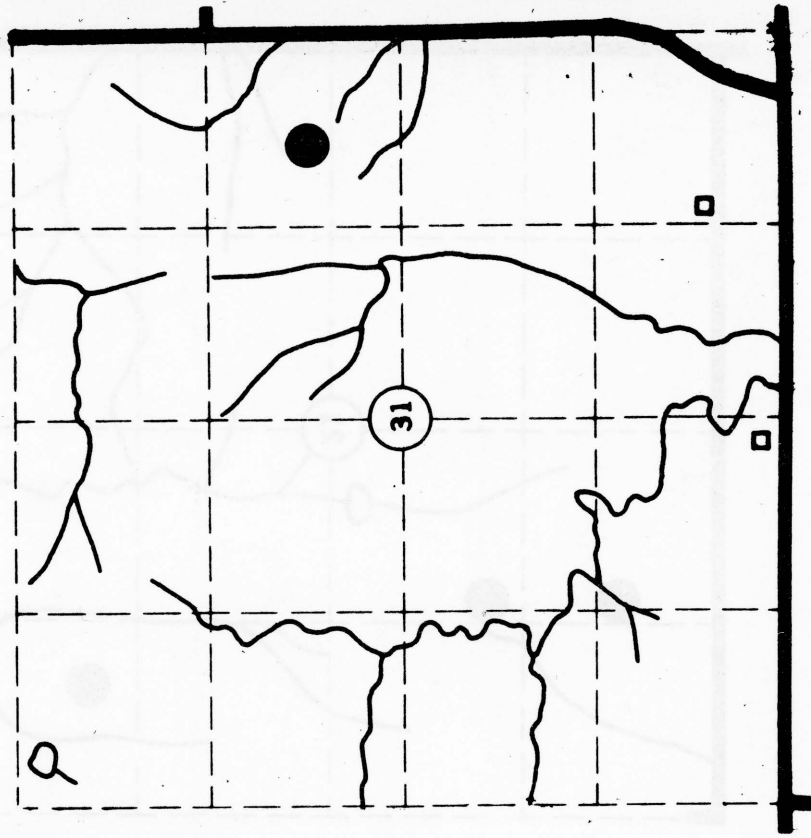
Site No. SG-66 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location NE 1/4 Sec. 31 Twp. 11S Range 3W
 Owner Ethel Kibler 838 N. Rock Minneapolis, Kansas
 address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

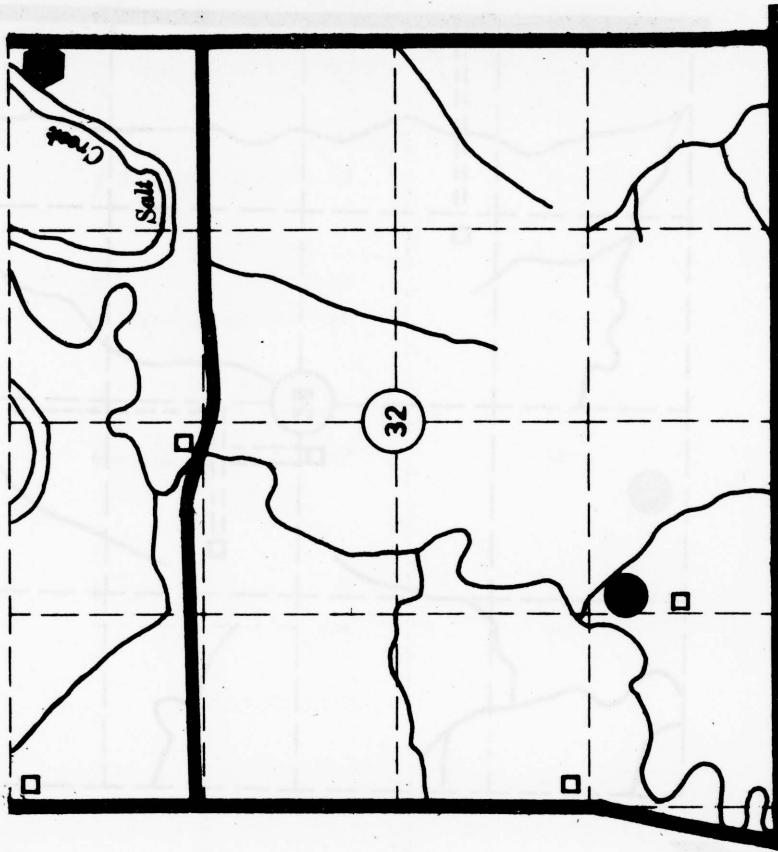
Site No. SG-67 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location SW $\frac{1}{4}$ Sec. 32 Twp. 11S Range 3W
 Owner Lennie Shoemaker Route 2 Minneapolis, Kansas
name address
 Nature of Deposit Dry accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Not Sampled

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	8	16	30				

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. SG-68 Date August, 1976
Kd
 Material Gravel County Ottawa
 Location NW 1/4 Sec. 28 Twp. 12S Range 3W
 Owner James Yost Salina, Kansas address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VIII
 Status of Site Open Materials Site; Not Sampled

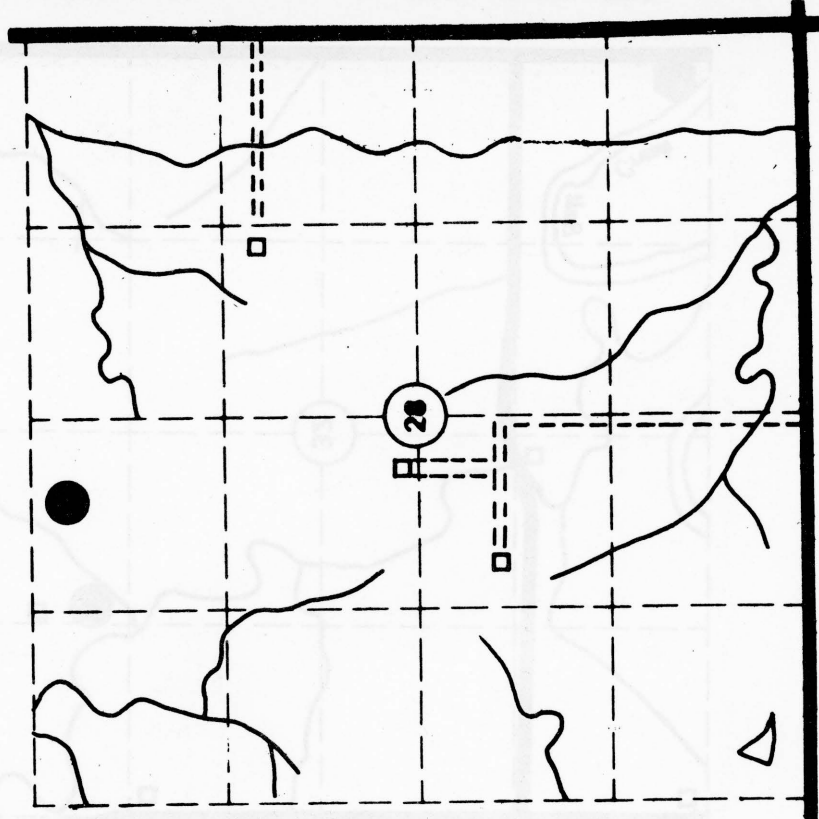
EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of overburden	Depth of Material	Percent Retained					Mesh 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	1/4	3/16				

CORRELATION DATA

Geological Age Cretaceous
 Geological Source Dakota Formation
 Material Similar To _____
 Specific Gravity (sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.ft. _____ Str. Ratio _____
 Remarks _____

Scale: 1" = 1/4 Mile



MATERIAL SITE DATA FORM

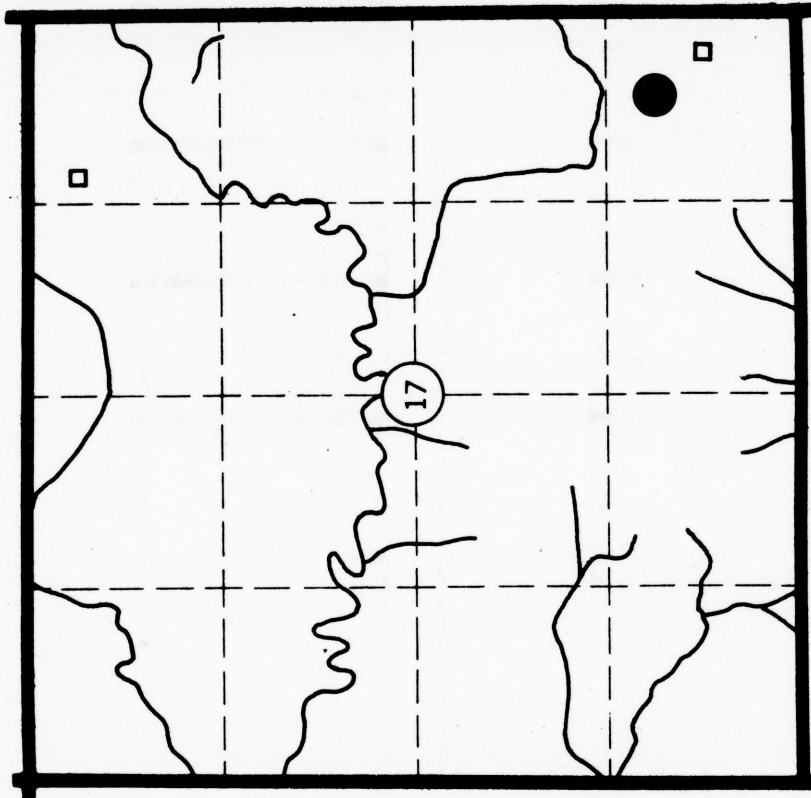
Site No. SG-69 Date August, 1976
Qtn
 Material Gravel County Ottawa
 Location SE 1/4 Sec. 17 Twp. 12S Range 1W
Laverne Cherry Route 2 Soloman, Kansas
 Owner name address
 Nature of Deposit Dry accessibility Good Site Located on Plate IX
 Status of Site Open Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

PROSPECTIVE MATERIALS SITES ; SAMPLED

LEGEND

=====	Trail or lane
—————	Road
-+ + + + + + + -	Railroad
~~~~~	Hedge or trees
~~~~~ Name	Major streams
~~~~~	Intermittent streams
~~~~~	Pond or lake

■	Open materials sites; sampled
●	Open materials sites; not sampled
▼	Prospective materials sites; sampled
◼	Prospective materials sites; not sampled
⑤	Center of section
□	Dwelling
⊕	Cemetery
▣	School
⊕	Church
▣	Town or city

MATERIAL SITE DATA FORM

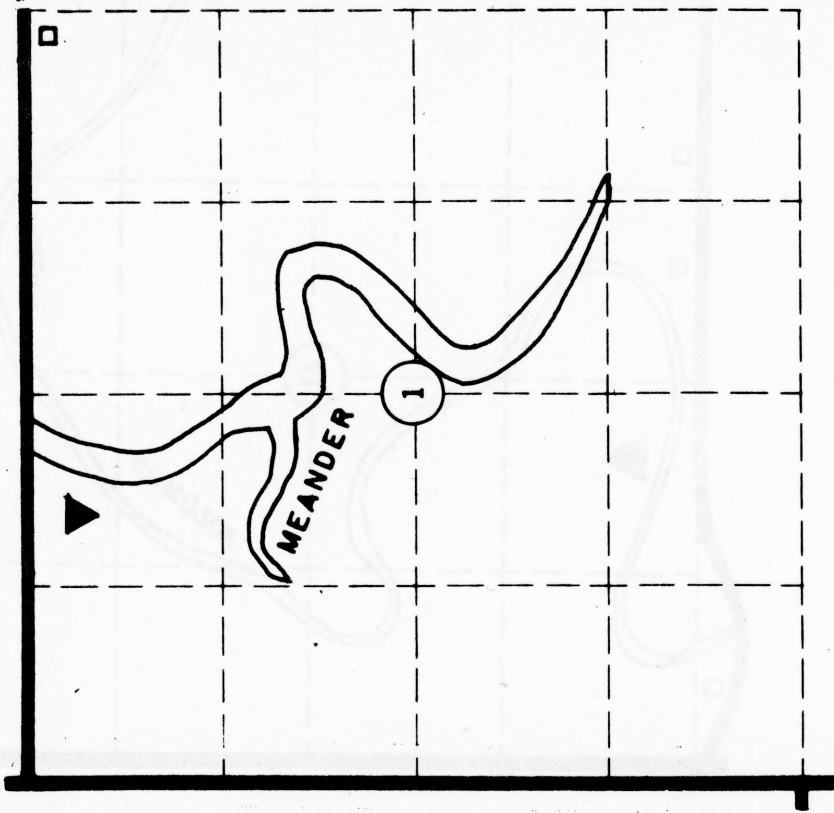
Site No. Si-70 Date August, 1976
Otw
 Material Mineral Filler County Ottawa
 Location NW 1/4 Sec. 1 Twp. 9S Range 5W
 Owner Grace Olsen, et al Glasco, Kansas
 address
 Nature of Deposit Dry Accessibility Good Site Located on Plate I
 Status of Site Prospective Materials Site; Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained							Wash 200	G.F.	L.L.	P.I.		
				1/2	3/4	3/8	1/4	3/16	1/8	3/32					1/32	
1	C	1	6													
2	Si	1	3								100		29	7		
3	Si	.5	3.5													

CORRELATION DATA

Geological Age Quaternary
 Geological source Wisconsinan Terrace
 Material Similar to 72-7
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Co. ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. SG+71 Date August, 1976
Q1W
 Material Gravel County Ottawa
 Location NW 1/4 Sec. 17 Twp. 9S Range 4W
 Owner J. H. Payne 725 E. Republic Salina, Kansas
 address
 Nature of Deposit Wet Accessibility Good Site Located on Plate I
 Status of Site Prospective Materials Site; Sampled

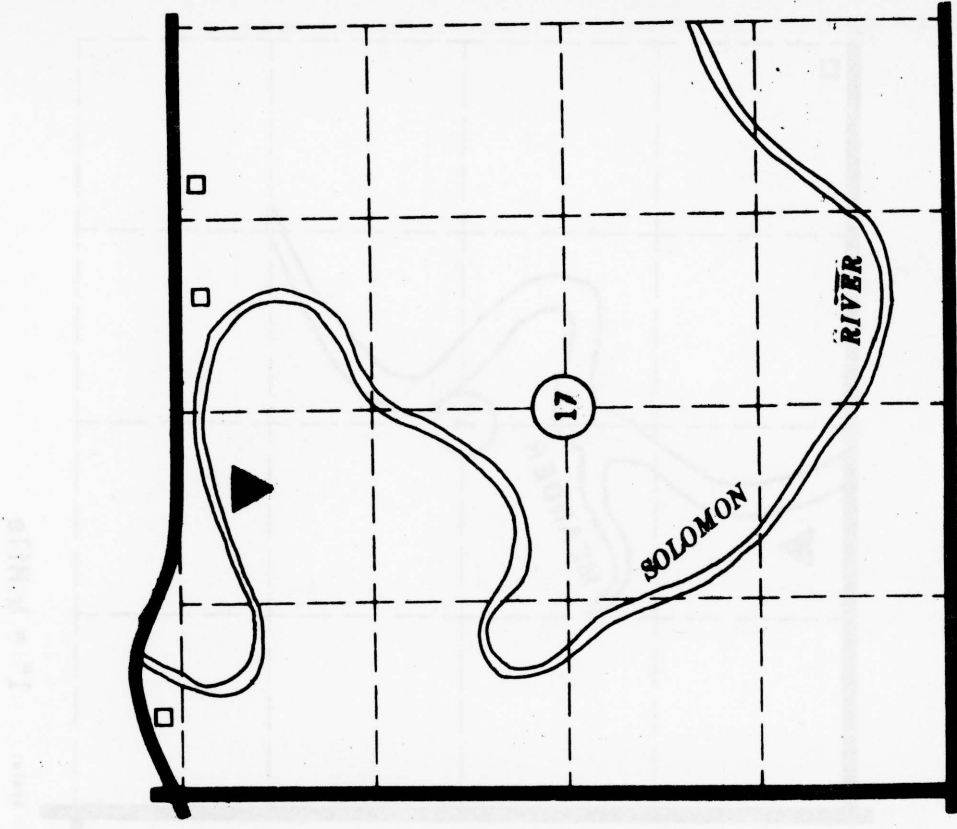
EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-burden	Depth of Material	Percent Retained							Wash 200	G.F.	L.L.	P.I.	
				1 1/2	3/4	3/8	1/2	3/16	1/8	1/4					
1	Sand	27	30		0	1	313	37	67	90	96	97	2.7		
2	Sand	24	26		0	2	1031	68	82	90	94	95	4.7		
3	Clay	27	29		0	2	720	49	73	93	96	97	3.4		
4	Sand	29	31		0	1	210	32	59	87	94	96	4.2		

CORRELATION DATA

Geological Age Quaternary
 Geological Source Wisconsinan Terrace
 Material Similar To 72-23

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

Site No. FS+72 Date August, 1976
Qds
 Material Fine Sand County Ottawa
 Location Center 1/3, E 1/2 Sec. 34 Twp. 11S Range 2W
 Owner Ray Slick ^{name} Bennington, Kansas _{address}
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX
 Status of Site Prospective Materials Site; Sampled

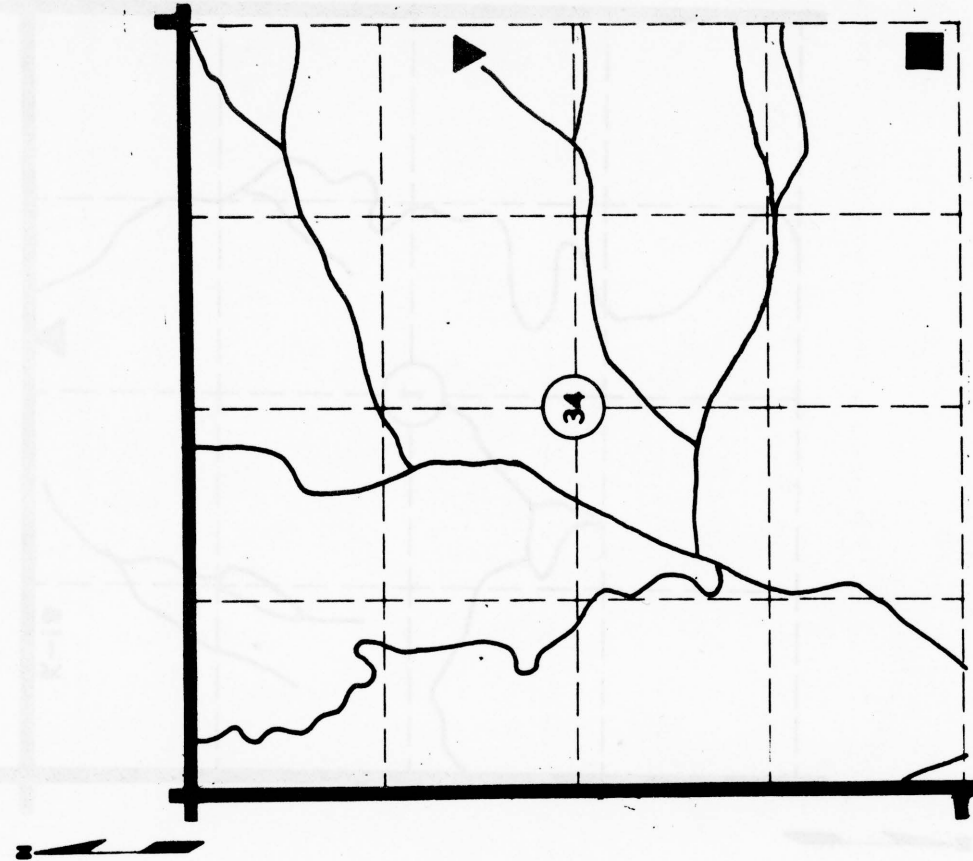
EXPLORATION DATA

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
5	55	0	11				0	1	1	10	70	21.7		19	1
9	Shale	0	3				0	3	46	89	4.8			20	1
14	Shale	0	3				0	1	3	42	84	10.8		18	1

CORRELATION DATA

Geological Age Quaternary
 Geological Source Dune Sand
 Material Similar To 72-5
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____

Scale: 1" = 1/4 Mile



MATERIAL SITE DATA FORM

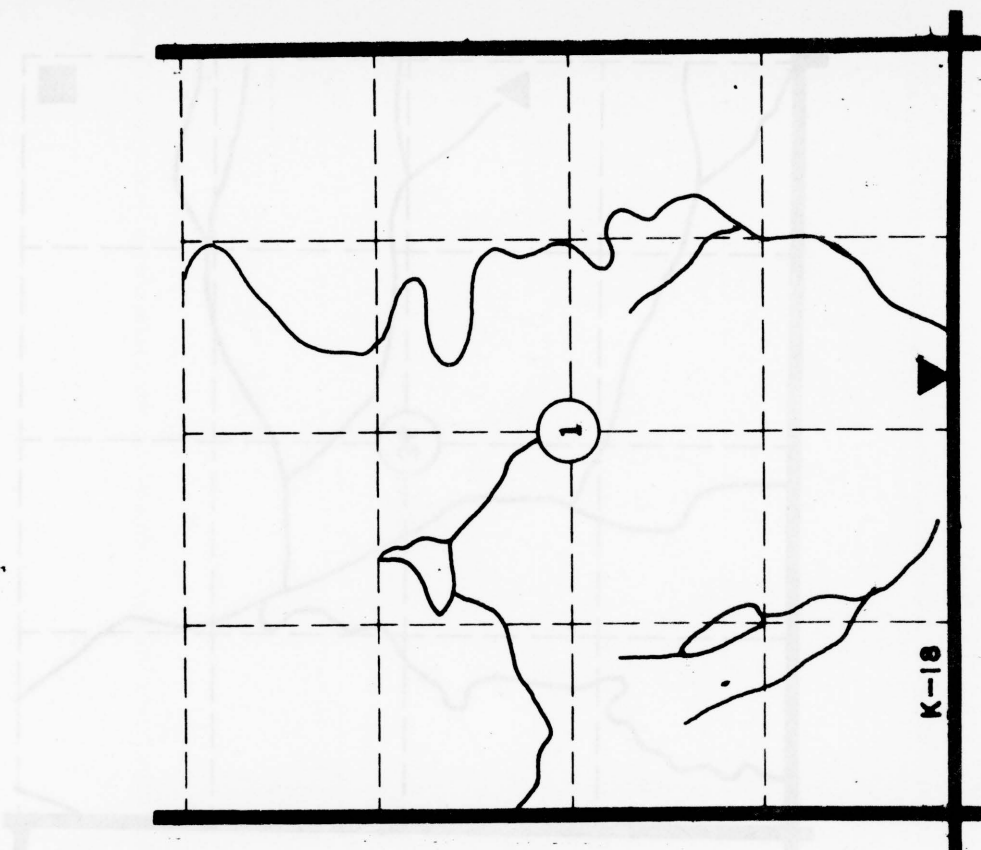
Si-73
 Site No. Qtn Date August, 1976
 Material Silt & Fine Sand County Ottawa
 Location SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 1 Twp. 12S Range 2W
 Owner Ralph Crow Bennington, Kansas address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX
 Status of Site Prospective Materials Site; 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	1	16	30	50					100
1	Clay	2.5						0	3	15	76	.18	23	4
2	Fs	2	3				1	1	12	30	62	.44	24	7
3	Clay	2.5					1	3	10	20	76	.34	30	11
4	Clay	2						1	7	15	82	.23	30	11
5	Clay	2						1	7	16	81	.24	25	5















CORRELATION DATA

Geological Age Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar To 72-6
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



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
	Major streams		Center of section
	Intermittent streams		Dwelling
	Pond or lake		Cemetery
			School
			Church
			Town or city

MATERIAL SITE DATA FORM

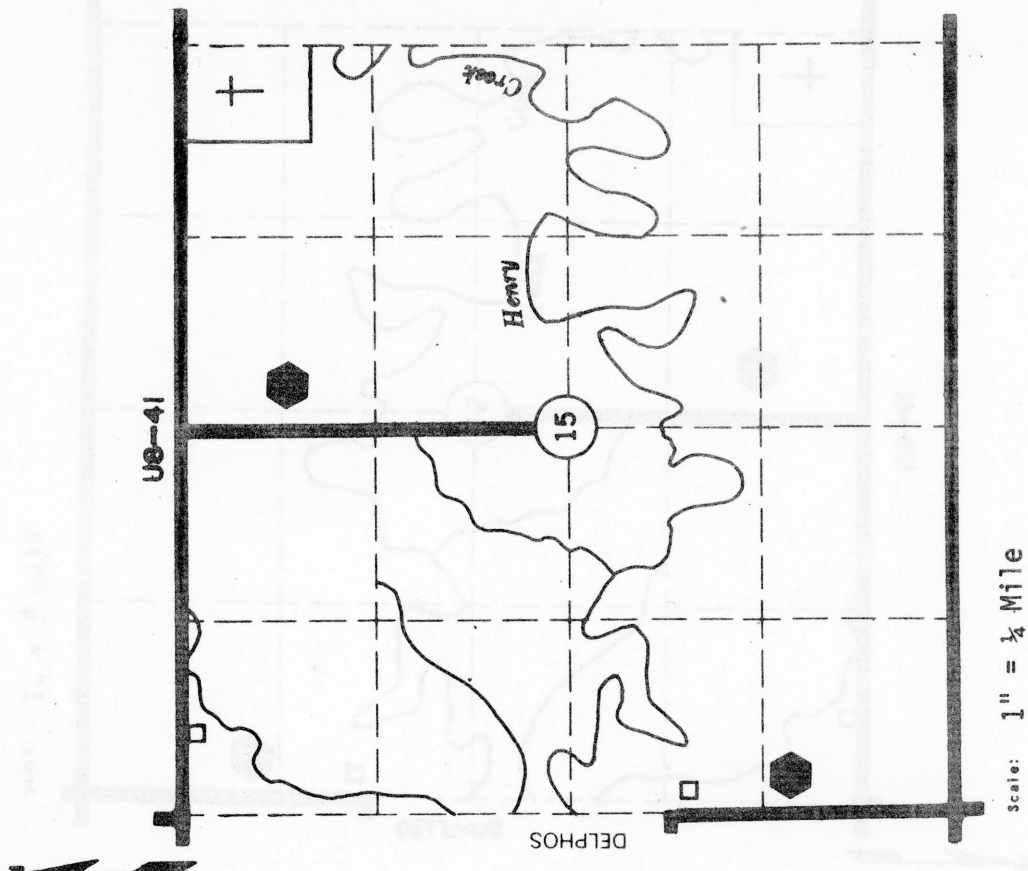
Site No. SG+74
Qti Date August, 1976
 Material Sand & Gravel County Ottawa
 Location SW $\frac{1}{4}$ Sec. 15 Twp. 9S Range 4W
 Owner Florence E. Ablard Delphos, Kansas
 name address
 Nature of Deposit Wet Accessibility Good Site Located on Plate I
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



MATERIAL SITE DATA FORM

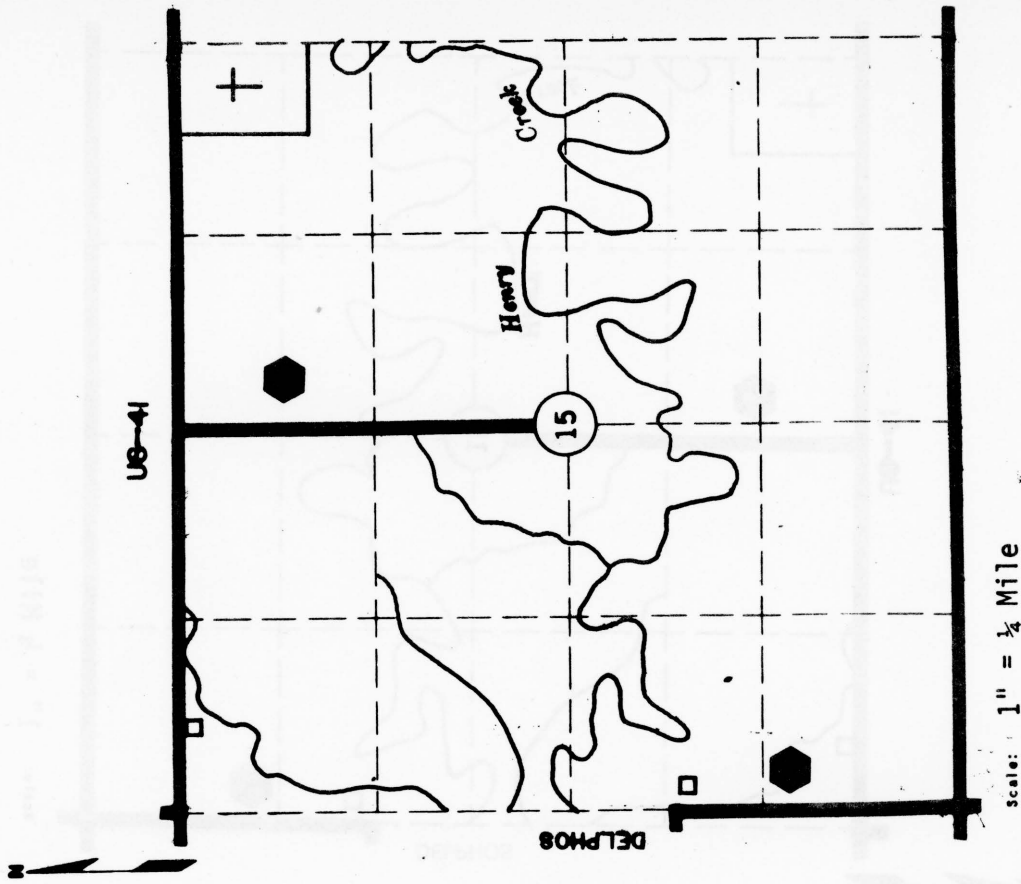
Site No. SG+75 Date August, 1976
Qti
 Material Gravel County Ottawa
 Location NE 1/4 Sec. 15 Twp. 9S Range 4W
 Owner Hazel Paramore 2928 N. 73rd Bethel, Kansas
 address
 Nature of Deposit Wet Accessibility Good Site Located on Plate I
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Material	Percent Retained							Mesh 200	G.F.	L.L.	P.I.
			1 1/2	3/4	3/8	8	16	30	50				

CORRELATION DATA

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



MATERIAL SITE DATA FORM

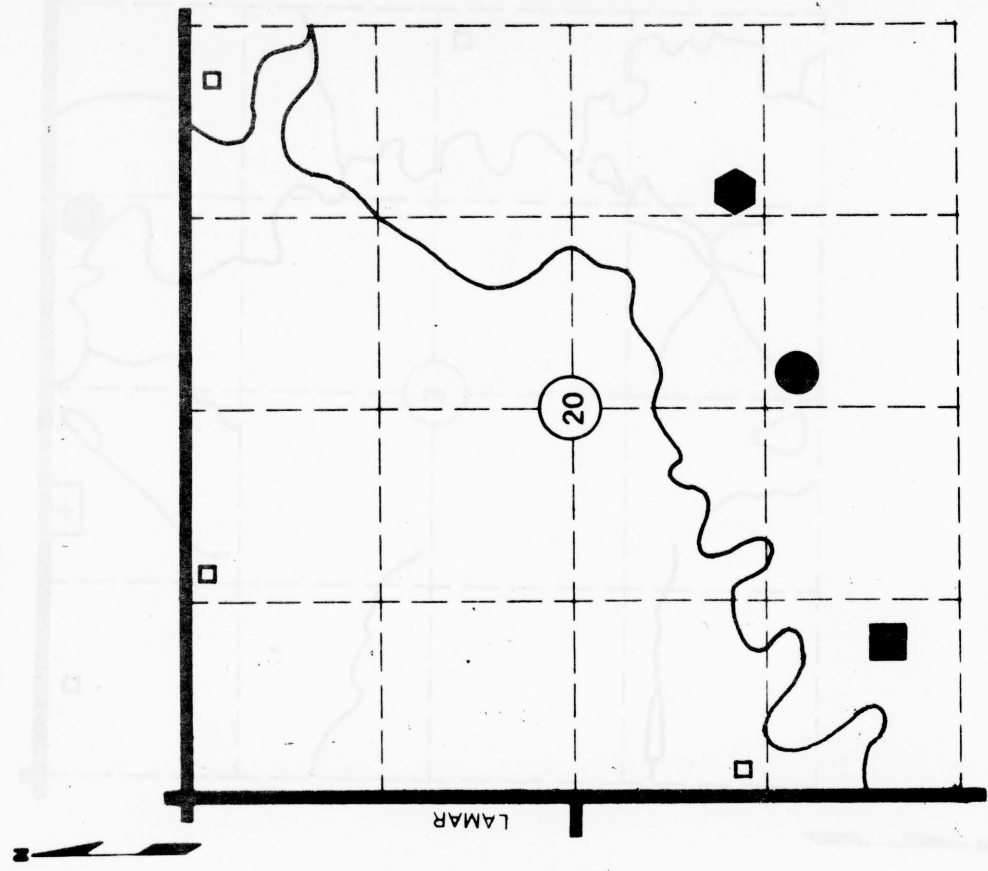
Site No. SS+76 Date August, 1976
Kd
 Material Sandstone County Ottawa
 Location NE 1/4 SE 1/4 Sec. 20 Twp. 9S Range 2W
 Owner L. & J. Carson Miltonvale, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate II
 Status of Site Prospective Materials Site; Not Sampled

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	4	8	16					30	50	100	

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

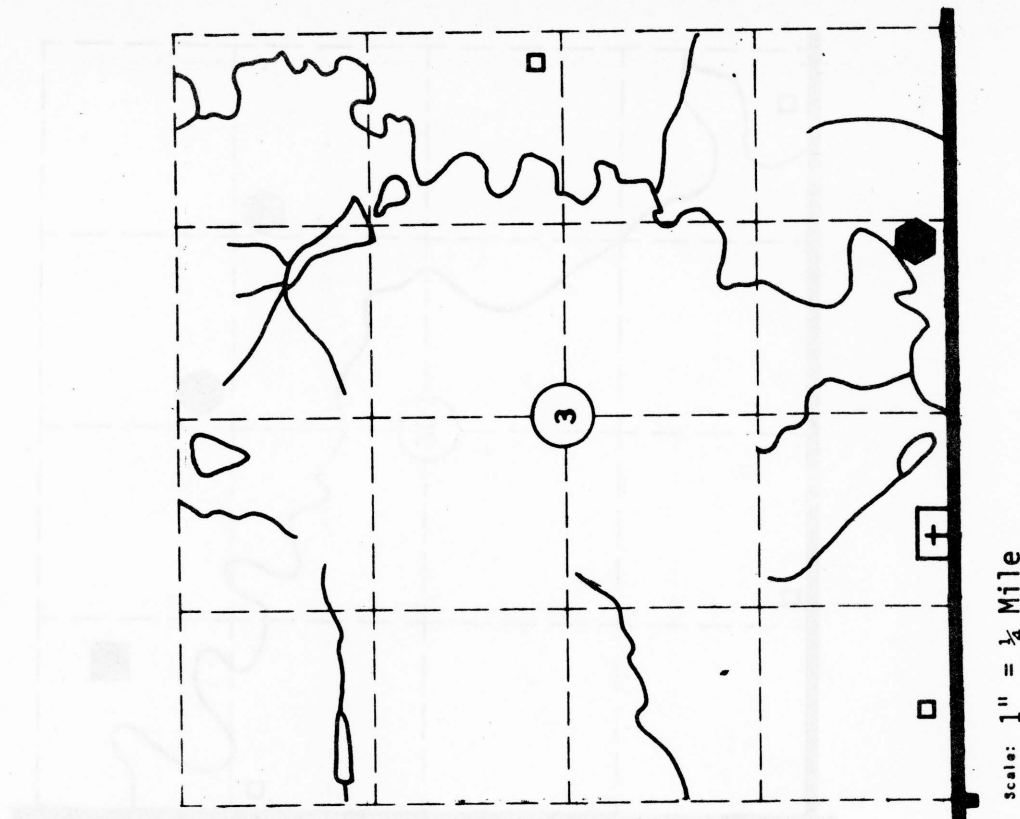
Site No. VA-77 Date August, 1976
Qtn
 Material Volcanic Ash County Ottawa
 Location SE 1/4 Sec. 3 Twp. 9S Range 2W
 Owner Bessie Fuller Miltonvale, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site located on Plate III
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

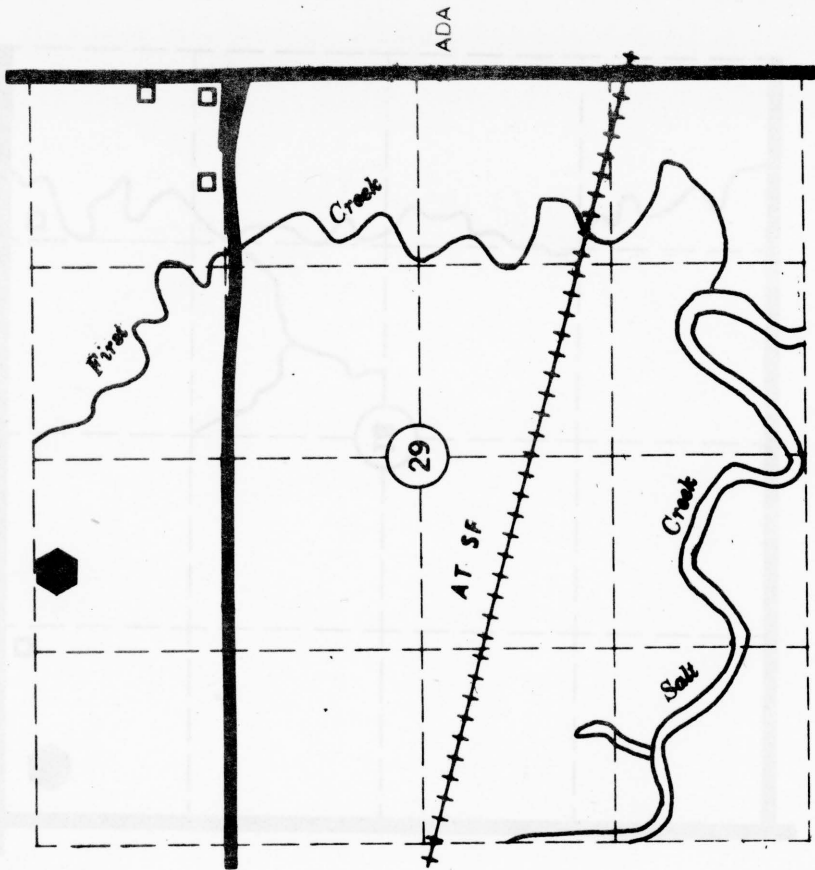
Site No. VA-78 Date August, 1976
Qtn
 Material Volcanic Ash County Ottawa
 Location NW 1/4 Sec. 29 Twp. 10S Range 5W
 Owner Oliver Woodruff 119 E. 2nd Minneapolis, Kansas
 address
 Nature of Deposit Dry accessibility Good Site located on Plate IV
 Status of Site Prospective Materials Site; Not Sampled

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 Quaternary
 Geological Source Nebraskan - Kansan Terrace
 Material Similar to _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Co. ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SITE DATA FORM

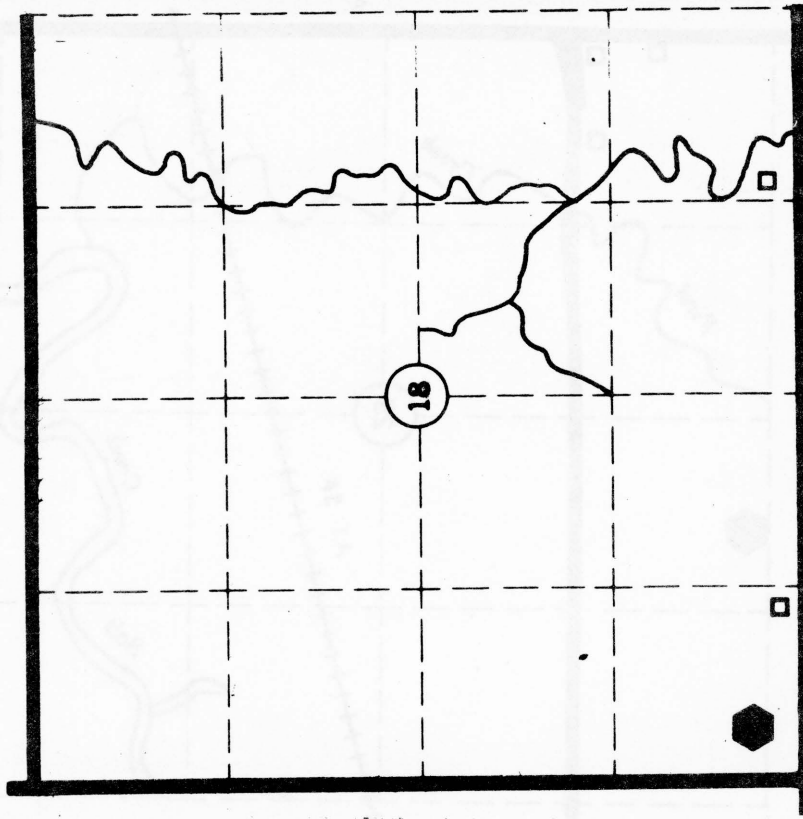
Site No. SG-79 Date August, 1976
Qti
 Material Sand & Gravel County Ottawa
 Location SW 1/4 Sec. 18 Twp. 10S Range 3W
 Owner Darrel Hubbard 109 S. 1st Ave. Minneapolis, Kansas
address
 Nature of Deposit Wet Accessibility Good Site Located on Plate V
 Status of Site Prospective Materials Site; Not Sampled

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	1	2	4	8	16					30	50	100	

CORRELATION DATA

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



MATERIAL SITE DATA FORM

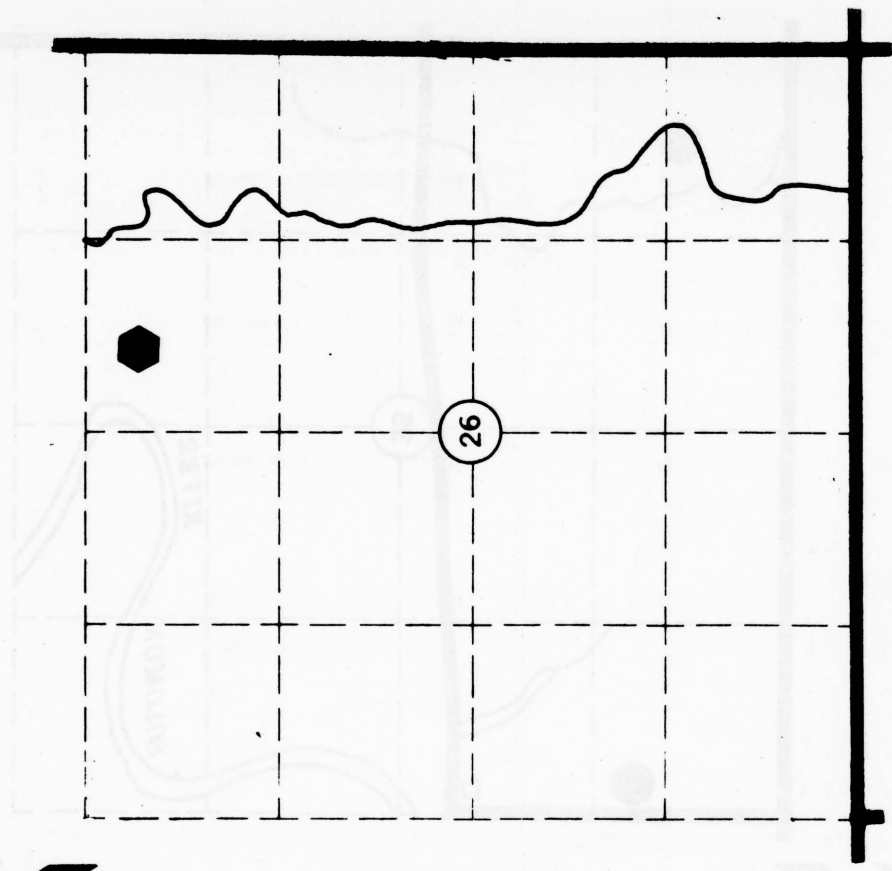
Site No. SG+80
Qti Date August, 1976
 Material Sand & Gravel county Ottawa
 Location NE 1/4 Sec. 26 Twp. 10S Range 4W
 Owner C. M. Stout 1205 Dessert Hill Dr. Sun City Center, Fla
 Nature of Deposit Wet accessibility Good Site Located on Plate V
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of overburden	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 Quaternary
 Geological Source Illinoian Terrace
 Material Similar to _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Co.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

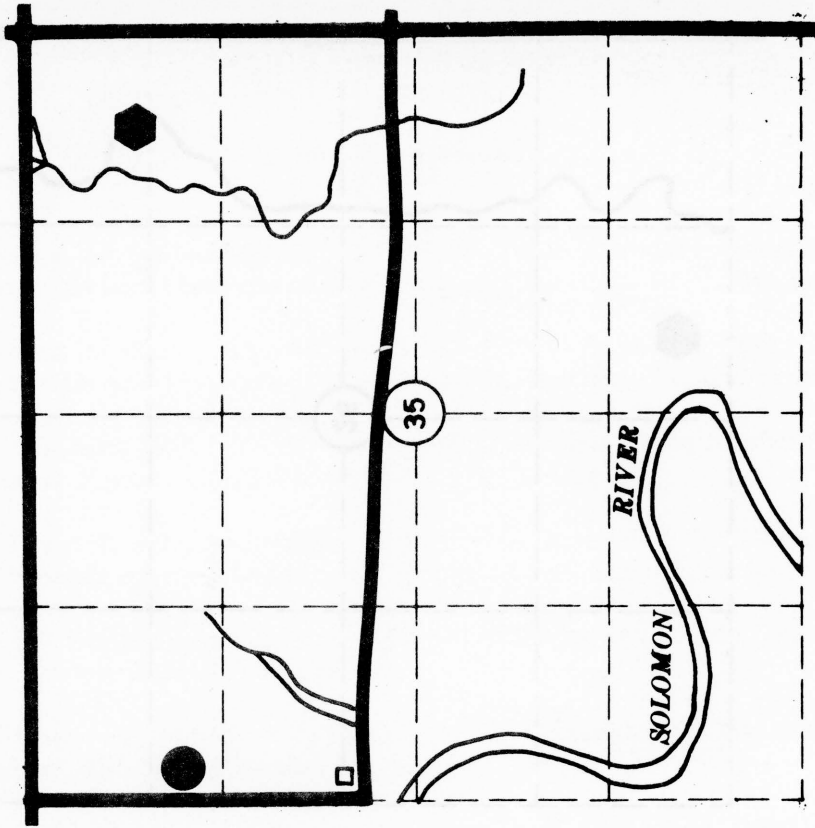
Site No. SG+81 Date August, 1976
Qti
 Material Sand & Gravel County Ottawa
 Location NE 1/4 Sec. 35 Twp. 10S Range 4W
 Owner J. Weidler 838 N. Rock Minneapolis, Kansas
 address
 Nature of Deposit Wet Accessibility Good Site Located on Plate V
 Status of Site Prospective Materials Site; Not Sampled

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	4	8	16	30					50	100	

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

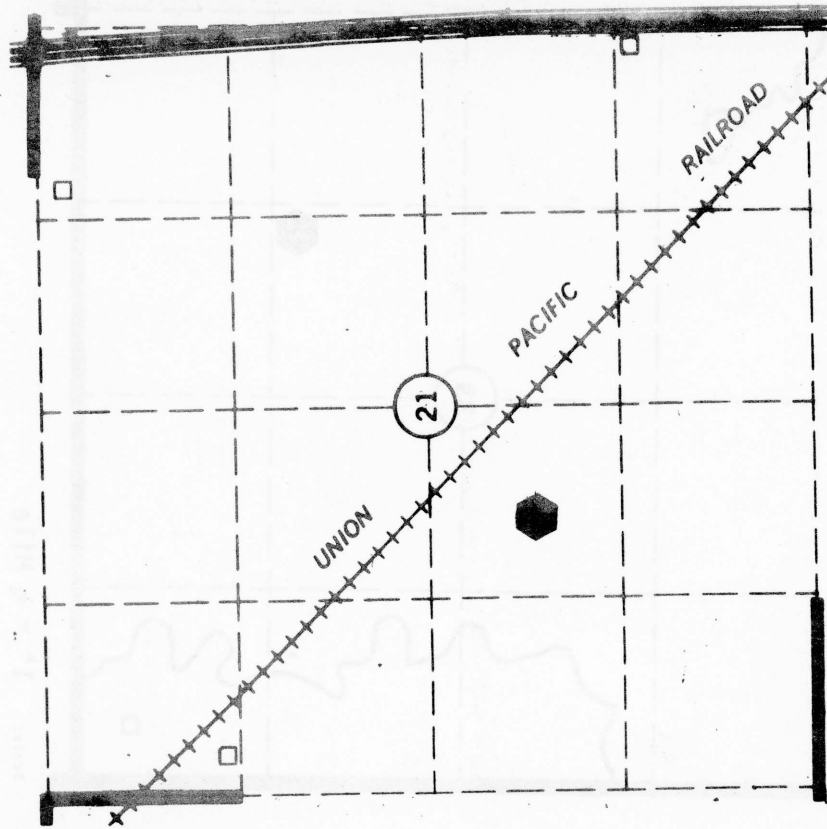
Site No. SG+82 Date August, 1976
Qti
 Material Sand & Gravel County Ottawa
 Location SW 1/4 Sec. 21 Twp. 11S Range 3W
 Owner Helen Sauer 3 Leonard Ct. Newton, Kansas
 Nature of Deposit Accessibility _____ Site Located on Plate V
 Status of Site Prospective Materials Site; Not Sampled

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	5/8	3/16	1/8	16				

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

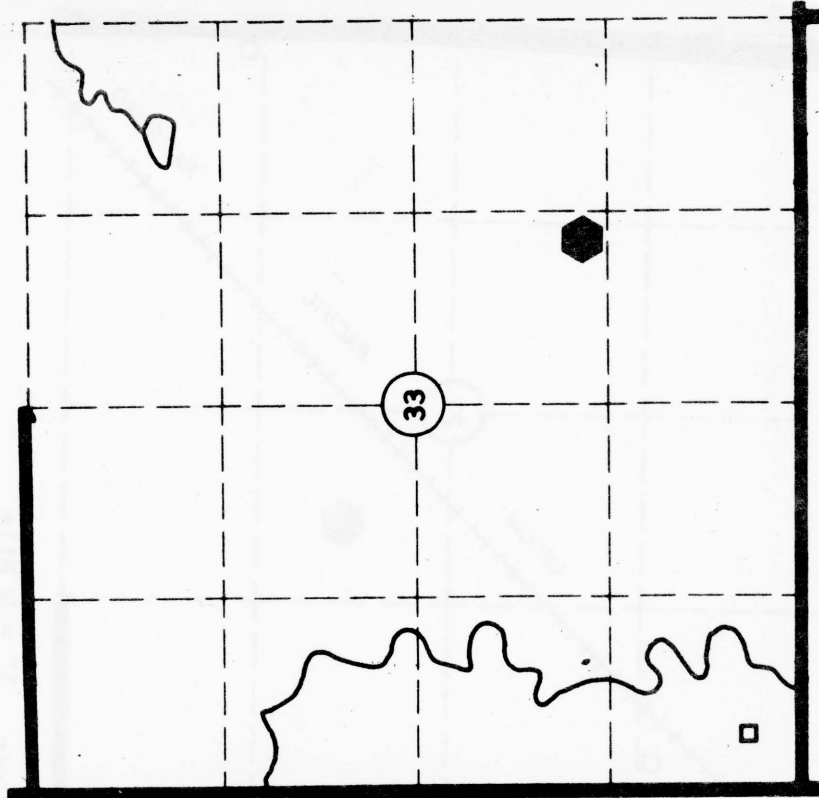
Site No. SS-83 Date August, 1976
Kd
 Material Sandstone County Ottawa
 Location SE 1/4 Sec. 33 Twp. 11S Range 5W
 Owner F. L. Buck name Tescott, Kansas address
 Nature of Deposit Dry Accessibility Good Site Located on Plate VII
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Overburden	Depth of Material	Percent Retained					Wash 200	G.F.	L.L.	P.I.
				1 1/2	3/4	3/8	4	8				

CORRELATION DATA

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



Scale: 1" = 1/2 Mile

MATERIAL SITE DATA FORM

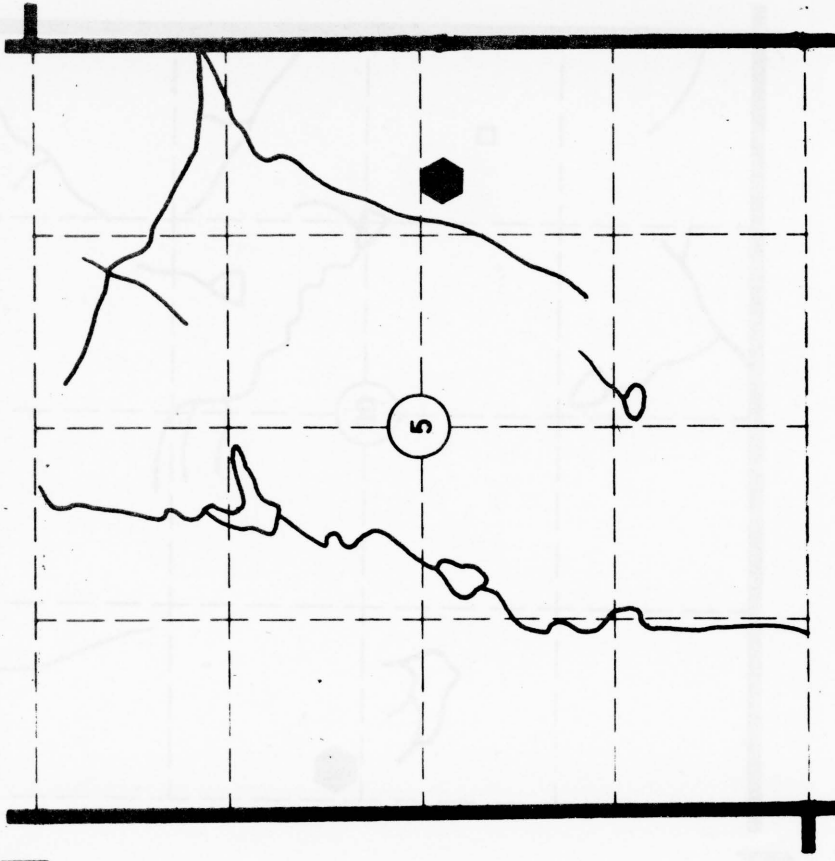
Site No. SS-84 Date August, 1976
Kd
 Material Sandstone County Ottawa
 Location SE 1/4 Sec. 5 Twp. 12S Range 5W
 Owner Crystelle Ganson Box 218 Concordia, Kansas
address
 Nature of Deposit Dry accessibility Good Site located on Plate VII
 Status of Site Prospective Materials Site; Not Sampled

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 Cretaceous
 Geological Source Dakota Formation
 Material Similar To _____
 Specific Gravity (sat.) _____ (dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

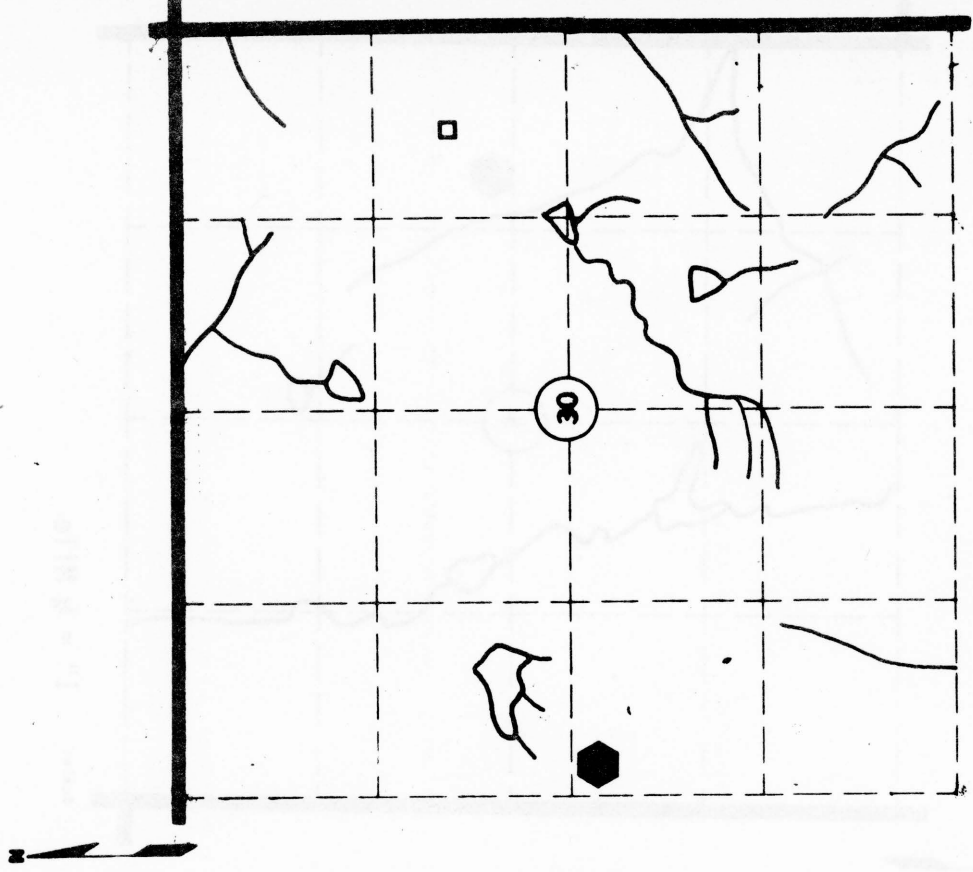
Site No. SS+85 Date August, 1976
Kd County Ottawa
 Material Sandstone
 Location SW 1/4 Sec. 30 Twp. 12S Range 5W
 Owner Mathews & Berkley, et al Tescott, Kansas
 address
 Nature of Deposit Dry accessibility Good Site Located on Plate VII
 Status of Site Prospective Materials Site; Not Sampled

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	5/8	16	30				

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

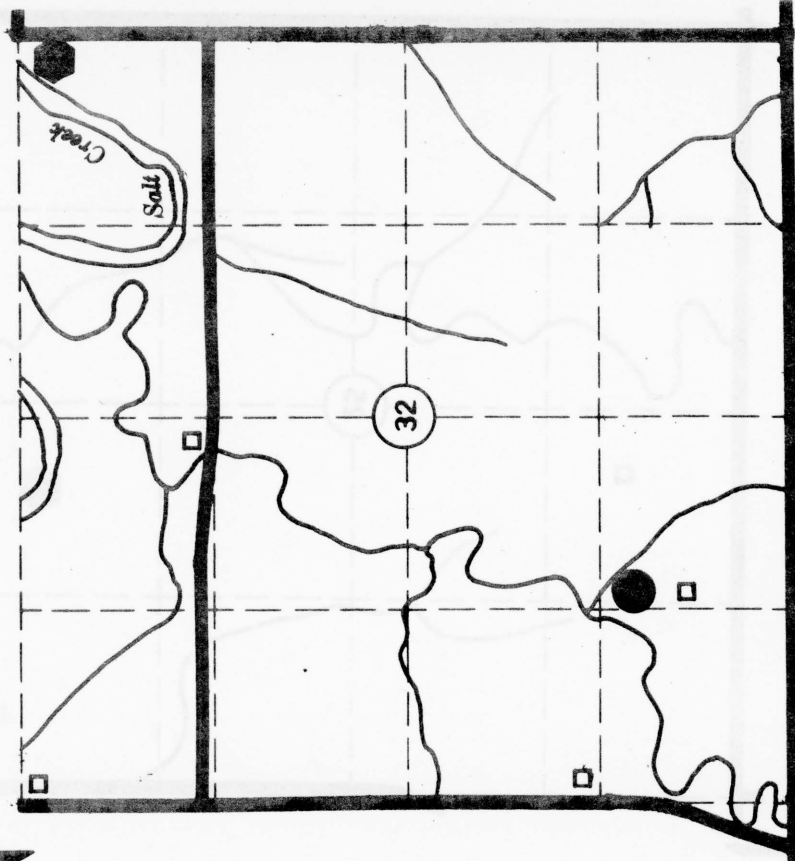
Site No. SG+86 Date August, 1976
 Material Sand & Gravel County Ottawa
 Location NE 1/4 Sec. 32 Twp. 11S Range 3W
 Owner Vincent Pieschl Route 2 Minneapolis, Kansas
 Nature of Deposit Wet Accessibility Good Site Located on Plate VIII
 Status of Site Prospective Materials Site; Not Sampled

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	4	8	16	30	50					100

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

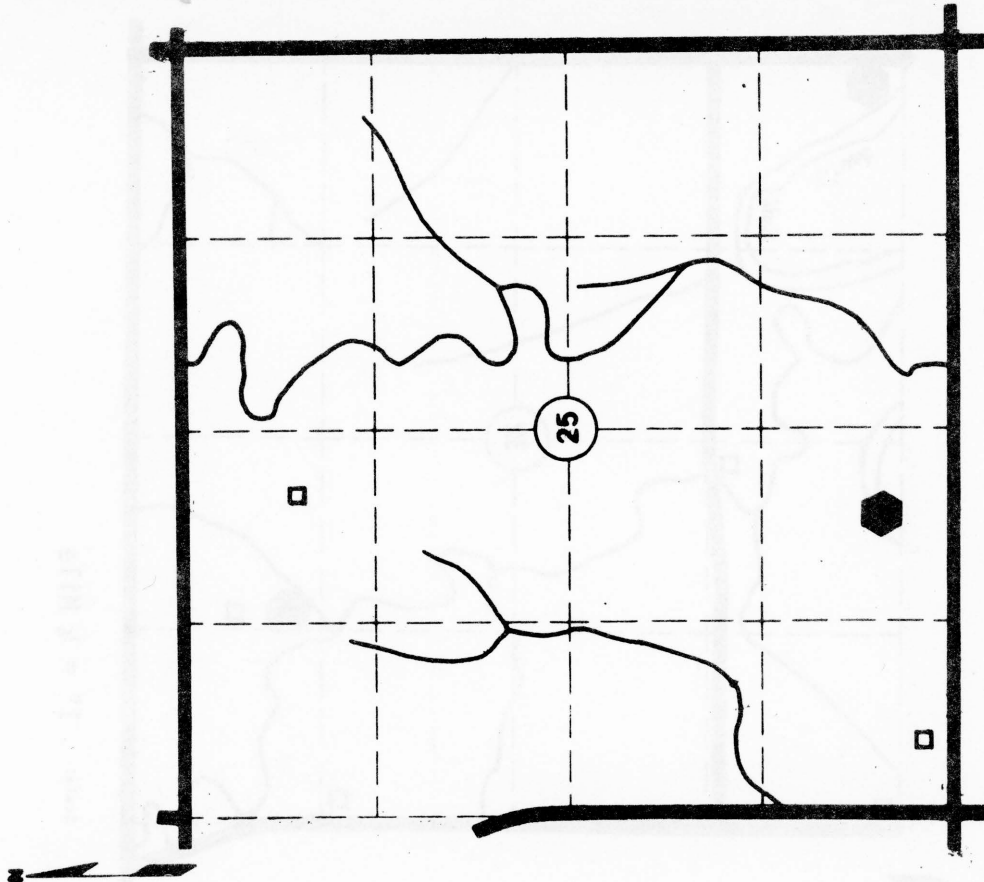
Site No. SG+87 Date August, 1976
Ott County Ottawa
 Material Sand & Gravel
 Location SW $\frac{1}{4}$ Sec. 25 Twp. 11S Range 3W
 Owner Kenneth Boardman Minneapolis, Kansas
 Name Address
 Nature of Deposit Wet Accessibility Good Site Located on Plate VIII
 Status of Site Prospective Materials Site: Not 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.L.				
				1/2	3/4	1	2	4	8	16					30	50	100	

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

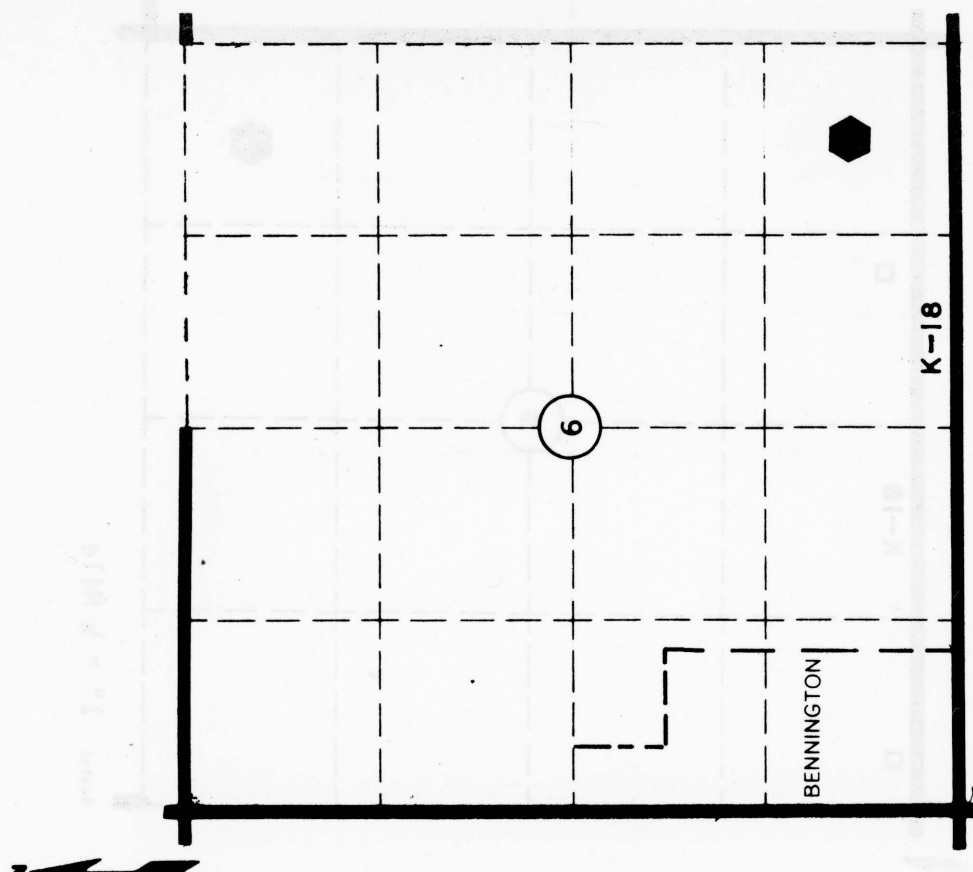
Site No. SG+88 Date August, 1976
 Material Sand & Gravel County Ottawa
 Location SE 1/4 Sec. 6 Twp. 12S Range 2W
 Owner Floyd Smith name Bennington, Kansas address
 Nature of Deposit Wet accessibility Good Site Located on Plate VIII
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

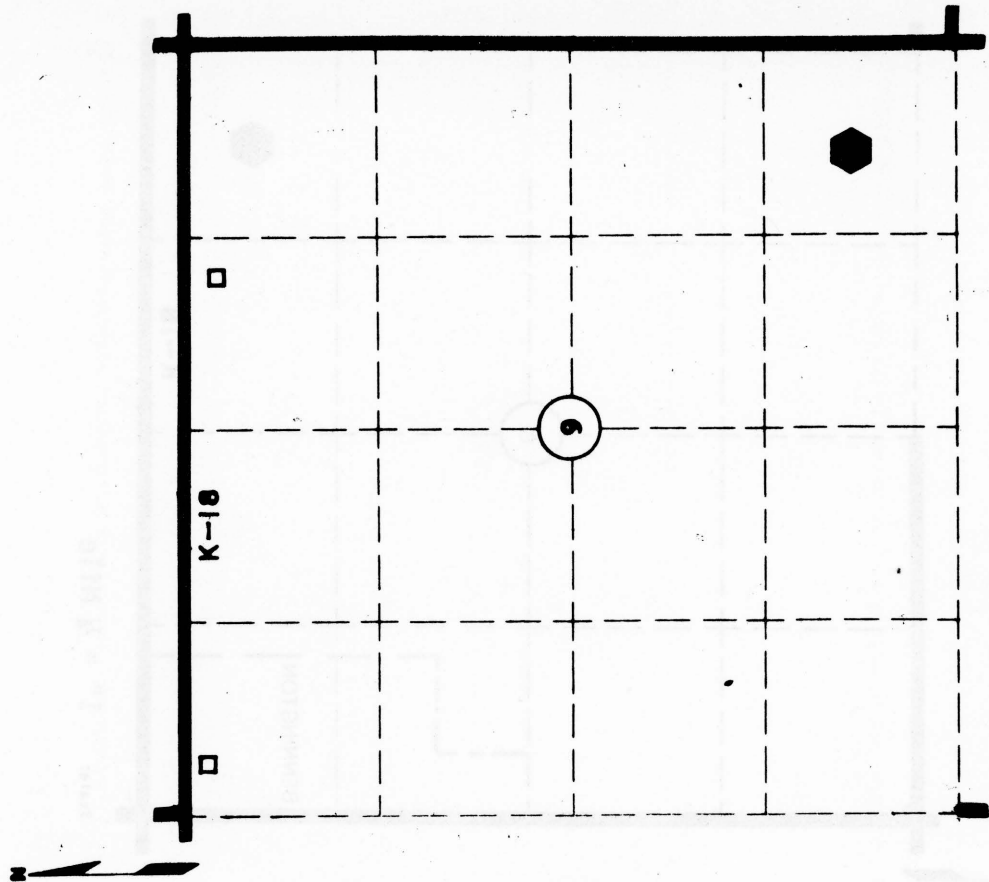
Site No. SG-89 Date August, 1976
Oti
 Material Sand & Gravel County Ottawa
 Location SE 1/4 Sec. 9 Twp. 12S Range 2W
 Owner Donald White Bennington, Kansas
 name address
 Nature of Deposit Dry Accessibility Good Site Located on Plate IX
 Status of Site Prospective Materials Site; Not Sampled

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	4	8	16					30	50	100	

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

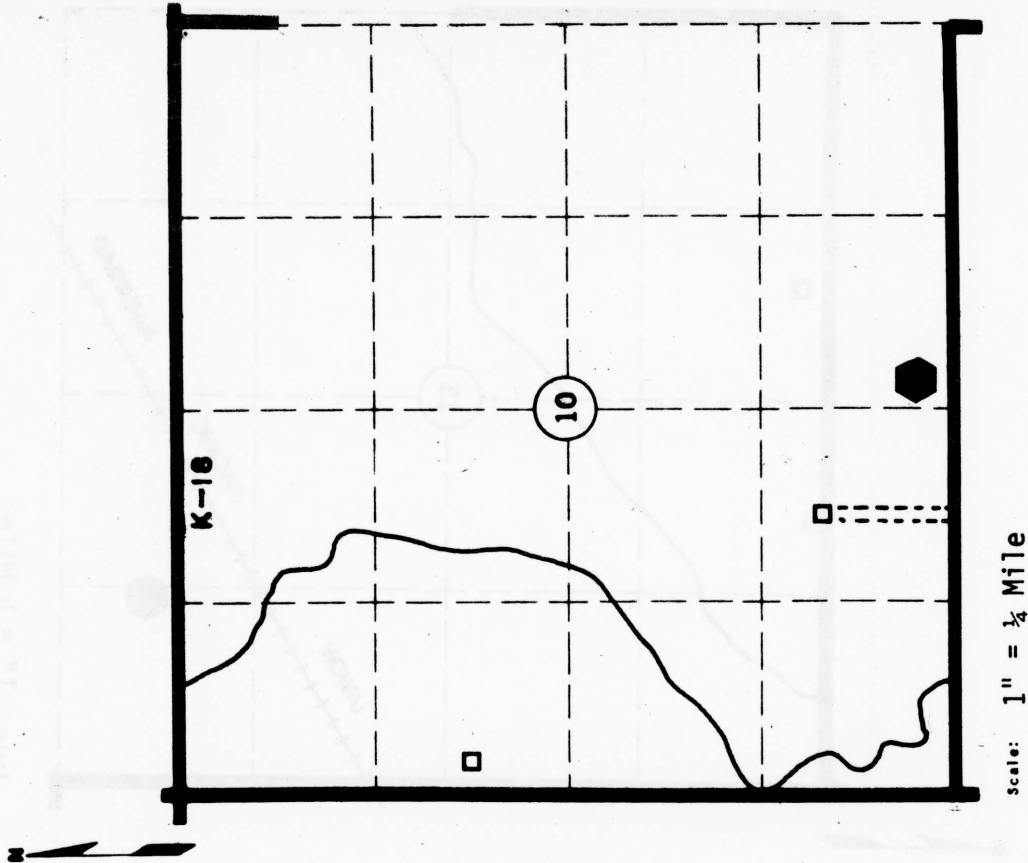
Site No. SG+90 Date August, 1976
Qtz
 Material Sand & Gravel County Ottawa
 Location SE 1/4 Sec. 10 Twp. 12S Range 2W
 Owner Nelson Slick Bennington, Kansas
 Nature of Deposit Wet Accessibility Good Site Located on Plate IX
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

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

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SITE DATA FORM

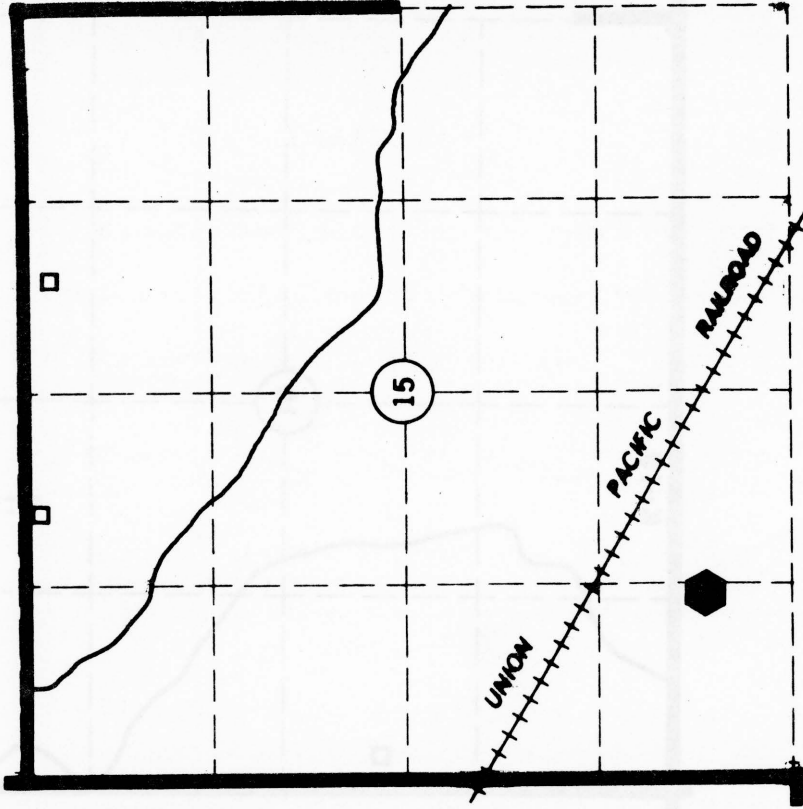
Site No. SG+91 Date August, 1976
Qtw County Ottawa
 Material Sand & Gravel Sec. 15 Twp. 12S Range 2W
SW $\frac{1}{4}$ Salina, Kansas
 Owner Jake Fisher address
 Nature of Deposit Wet Accessibility Good Site Located on Plate IX
 Status of Site Prospective Materials Site; Not Sampled

EXPLORATION DATA

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

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" = 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.

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

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

Clastic: Pertaining to or being a rock or sediment principally of broken fragments that are derived from pre-existing rocks or minerals and that have been transported individually for some distance from their places of origin; also said of the texture of such a rock.

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

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

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

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

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

- Degrade:** To lower the level of a stream or river valley by stream erosive action.
- Dip of geologic units:** Angle of incline of the bed with respect to horizontal, and the direction these beds are inclined.
- Disconformity:** An erosional or nondepositional surface between two parallel bedding planes.
- Dune sand:** A type of blown sand that has been piled up by wind action, usually consisting of rounded quartz grains having diameters varying from 0.1 to 1 mm.
- Embayment:** Term describing a continental border area that has sagged concurrently with deposition so that an unusually thick section of sediment results.
- Exposure pattern:** 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 unconsolidated minerals or rock particles, the dimensions of which are not less than 0.05 mm and not more than 0.42 mm. The term refers to size of grain and not to composition; however, since most sands are composed of quartz and feldspar, and the term is used without qualifications, a siliceous composition is implied.
- Fluvial cycle:** The stream-action cycle involving periods of deposition, erosion, and return to deposition.
- Formation:** A persistent body of rocks, having easily recognizable upper and lower boundaries that can be traced in the field without recourse to detailed paleontologic or petrologic analysis, and large enough to be represented on a geologic map as a practical or convenient unit for mapping and description.
- Fossil:** Any remains, trace, or imprint of a plant or animal that has been preserved, by natural processes, in the Earth's crust since some past geologic time.
- Geologic Era:** Largest unit of geologic time (e.g. Paleozoic, Mesozoic, and Cenozoic).
- Geologic period:** A unit of geologic time, shorter than an era and longer than an epoch (e.g. Cambrian, Cretaceous, and Tertiary).
- Geologic process:** Term pertaining to erosion, deposition, and diastrophic methods by which the Earth's surface has been shaped.
- Geologic structure:** The attitude of the rock units (i.e. whether they are horizontal or tilted).
- Geologic system:** A term that refers to rocks or deposits that were laid down during a particular geologic period (e.g. the Pennsylvanian, Permian, and Quaternary).

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

Gpm: Gallons per minute.

Gradation factor: The value obtained by adding the percentages of material retained on the 1½", 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.

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

Incised: A stream meander that has downcut or entrenched into the surface during and because of relative uplift of the surface.

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 semi-liquid and the plastic states of a 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.

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.

L/s: Liters per second.

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 large 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.
- Petroliferous:** Containing or yielding petroleum.
- Physiographic division:** A division of the state, based on general geologic and (or) geographic features.
- Plasticity index:** The water-content range of a soil at which it is plastic; determined by tests performed in accordance with Kansas Test Method KT-10 of the State Highway Commission of Kansas Construction Manual, Part V, 1969 edition.
- Pleistocene Series:** Deposits laid down during the Pleistocene Epoch.
- Pliocene Epoch:** The youngest major subdivision of the Tertiary Period.
- Prospective materials site:** A location where the geologic conditions are favorable for finding and producing construction aggregate.
- Quartzite:** Metamorphic rock produced by recrystallization of primary quartz sandstone under heat and pressure. Term is sometimes misused for quartzose sandstones.
- Quartz arenite:** Sands, the detrital fraction of which is 95% or more quartz and cemented by quartz or calcite. (Pettijohn, 1975)
- Quartzose:** Sands and sandstones consisting chiefly of quartz.
- Reactive aggregate:** A siliceous aggregate whose chemical properties react with cement causing a secondary growth within the concrete.
- Sand dunes:** Loose sand particles piled or heaped up by the wind.
- Sedimentary quartzite:** Term locally applied to scattered zones of calcium carbonate and silica-cemented sandstone in the Dakota Formation. Material is so well bonded that a fracture will penetrate the individual grains rather than break around them.
- Soundness:** Determined by tests performed in accordance with section 1001 of the State Highway Commission of Kansas Standard Specifications, 1973 edition.
- Specific gravity:** Determined by tests performed in accordance with A.A.S.H.O. designation T84 for fine aggregate and T85 for coarse aggregate.
- Stereoscopic vision:** Three-dimensional vision by means of viewing identical images on two photographs exposed from equal distance but at different angles.
- Stratigraphic position:** The vertical position of a geologic unit in relation to other geologic units.

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

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

Sublittoral: That part of the littoral zone that is between low tide and a depth of about 100 meters (328 feet) in a marine environment.

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

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

Unconformity: A substantial break or gap in the geologic record where a rock unit is overlain by another that is not next in the stratigraphic succession.

Unconsolidated deposits: Sediments 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 rocks by atmospheric agents.

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

Selected References

- American Association of State Highway Officials (1966) Standard Specifications for Highway Materials and Methods of Sampling and Testing: Pt. 1, 9th ed., 460 pp.
- American Association of State Highway Officials (1966) Standard Specifications for Highway Materials and Methods of Sampling and Testing: Pt. II, 9th ed., 693 pp.
- Bayne, C. K., and Walters, K. L. (1959) Geology and Ground-Water Resources of Cloud County, Kansas: Kansas Geol. Survey Bull. 139, 144 pp.
- Bayne, C. K., Boellstorff, John and Miller, B. B. (1976) Guidebook 24th Annual Meeting Midwestern Friends of the Pleistocene: Kansas Geol. Survey, 85 pp.
- Berry, Delmar (1952) Geology and Ground-Water Resources of Lincoln County, Kansas: Kansas Geol. Survey Bull. 95, 96 pp.
- Buck, L. P., Van Horn, R., and Young, R. G., (1951) Construction Materials in Cloud County, Kansas: U.S.G.S. Circular 88, 20 pp.
- Cary, J. Sheldon, Frye, John C., Plummer, Norman, and Swineford, Ada(1952) Kansas Volcanic Ash Resources: Kansas Geol. Survey Bull. 96, Pt. 1, pp. 1-68.
- Cole, V. B., and Ebanks, W. J. Jr., (1974) List of Kansas Wells Drilled into Precambrian Rocks: Kansas Geol. Survey, Subsurface Geology Series 1, 101 pp.
- Eaton, T. H. Jr. ,(1960) A New Armored Dinosaur From the Cretaceous of Kansas: University of Kansas Paleontological Contributions, Article 8, 24 pp.
- Folger, Anthony (1948) Geologic Report on Vine Creek Dome, Ottawa County, Kansas: Kansas Geol. Survey open-file report.
- Four Rivers RC & D Project Plan (1975), U.S. Department of Agriculture, Soil Conservation Service, Salina, Kansas, 226 pp.
- Franks, P., Coleman G., Plummer, N. and Hamblin, W. K. (1959). Cross-Stratification, Dakota Sandstone (Cretaceous), Ottawa County, Kansas: Kansas Geol. Survey Bull. 134, Pt. 6, pp.223-238.
- Frye, J. C. and Leonard, A. B. (1952) Pleistocene Geology of Kansas: Kansas Geol. Survey Bull. 99, 230 pp.
- Hargadine, G. D. (1965) Materials Inventory of Mitchell County, Kansas No. 3: State Highway Commission of Kansas, 143 pp.
- Hattin, Donald E. (1975) Stratigraphy and Depositional Environment of Greenhorn Limestone (Upper Cretaceous) of Kansas: Kansas Geol. Survey, Bull. 209, 128 pp.
- Lee, Wallace (1956) Stratigraphy and Structural Development of the Salina Basin Area: Kansas Geol. Survey Bull. 121, 167 pp.

- Mack, Leslie E., (1962) Geology and Ground-Water Resources of Ottawa County, Kansas: Kansas Geol. Survey Bull. 154, 145 pp.
- Merriam, Daniel F. (1963) The Geologic History of Kansas: Kansas Geol. Survey Bull. 162, 317 pp.
- Myers, L. D. (1977) Construction Materials Inventory of Cloud County, Kansas, No. 30: Kansas Department of Transportation (in press).
- Pettijohn, F. J. (1975) Sedimentary Rocks, Third Ed.: New York, Harper and Row, pp. 230-236.
- Plummer, Norman and Romary, J. F. (1942) Stratigraphy of the Pre-Greenhorn Cretaceous Beds of Kansas: Kansas Geol. Survey Bull. 41, Pt. 9, pp. 313-348.
- (1947) Kansas Clay, Dakota Formation: Kansas Geol. Survey Bull. 67, 241 pp.
- Schoewe, W. H. (1937) The Geology of "Rock City": Kansas Academy of Science Trans., V. 40, pp. 180-191.
- Swineford, Ada and Frye, John C. (1946) Petrographic Comparison of Pliocene and Pleistocene Volcanic Ash from Western Kansas: Kansas Geol. Survey Bull. 64., Pt. 1, pp. 1-32.
- Twenhofel, W. H. (1920) The Comanchean and Dakota Strata of Kansas: Am. Jour. Sci. 4th Ser., V. 49, pp. 281-297.
- Walters, K. L., and Bayne, C. K. (1959) Geology and Ground-Water Resources of Clay County, Kansas: Kansas Geol. Survey Bull. 136, 106 pp.
- Zeller, Doris E. ed. (1968) The Stratigraphic Succession in Kansas: Kansas Geol. Survey Bull. 189, 81 pp.

CONSTRUCTION MATERIALS INVENTORY SERIES

1.	Ellis County, Kansas	1963	A. H. Stallard
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
15.	Seward County, Kansas	1970	G. Hargadine
16.	Stevens County, Kansas	1970	G. Hargadine
17.	Rawlins County, Kansas	1968	A. H. Stallard
18.	Franklin County, Kansas	1969	A. H. Stallard
19.	Nemaha County, Kansas	1970	G. D. Hargadine
20.	Jefferson County, Kansas	1971	A. H. Stallard
21.	Butler County, Kansas	1967	G. D. Hargadine
22.	Doniphan County, Kansas	1974	G. E. Petersen
23.	Bourbon County, Kansas	1976	L. D. Myers
24.	Johnson County, Kansas	1970	G. E. Hilmes
25.	Douglas County, Kansas	1972	J. Jimenez
26.	Shawnee County, Kansas	1974	G. E. Petersen
27.	Miami County, Kansas	1975	G. E. Petersen & L. D. Myers
28.	Crawford County, Kansas	1975	G. E. Petersen
29.	Republic County, Kansas	1976	G. E. Petersen
*30.	Cloud County, Kansas		L. D. Myers
**31.	Ottawa County, Kansas	1977	G. E. Petersen

* In progress

** This report