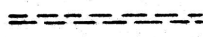
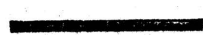


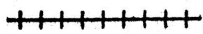
APPENDIX I


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


LEGEND


 Trail or lane


 Road


 Railroad


 Hedge or trees


 Major streams

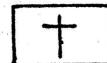
 Intermittent streams


 Pond or lake


 Open materials site: not sampled


 Center of section

 Farm site

 Cemetery

 School

 Church

 Town or city

MATERIAL SURVEY REPORT

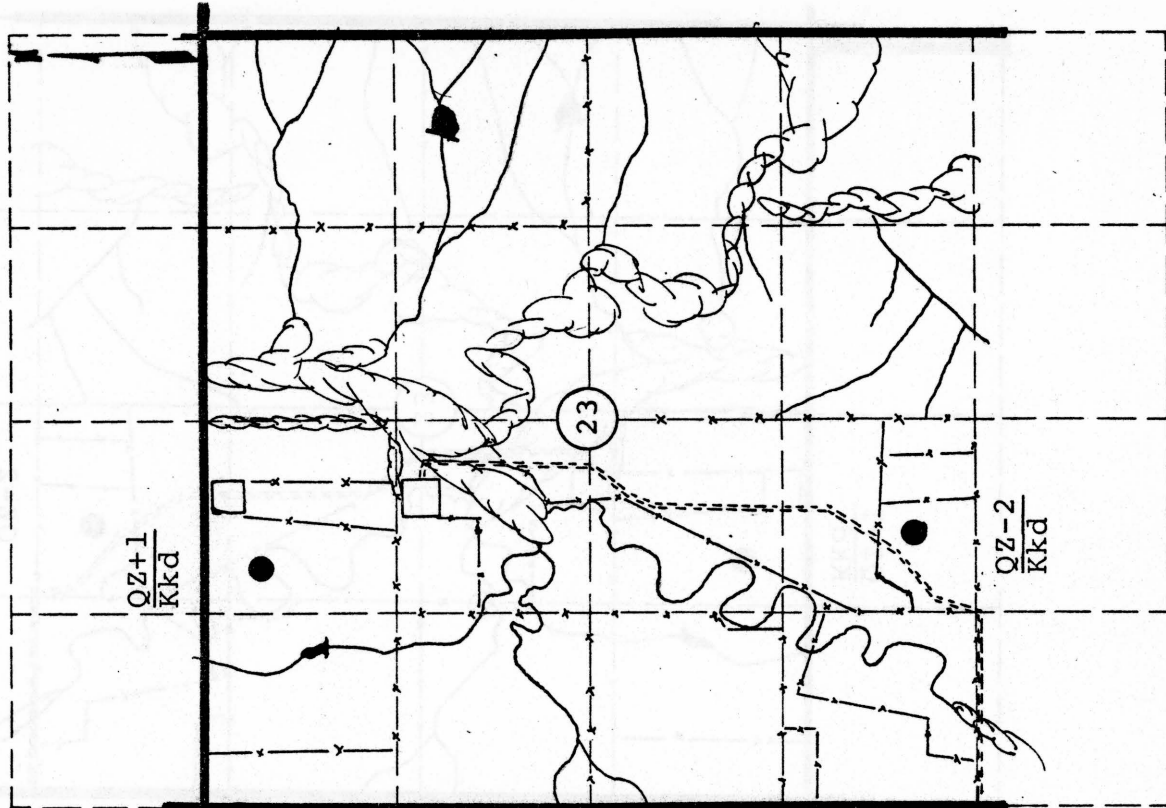
Site No. OZ+1 Date September 1965
Kkd
 Material "Quartzite" County McPherson
 Location NW 1/4 Sec. 23 Twp. 18S Range 2W
 Owner George J. Stavropoulos 116 W. Kirwin, Salina, Kansas
 address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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 SURVEY REPORT

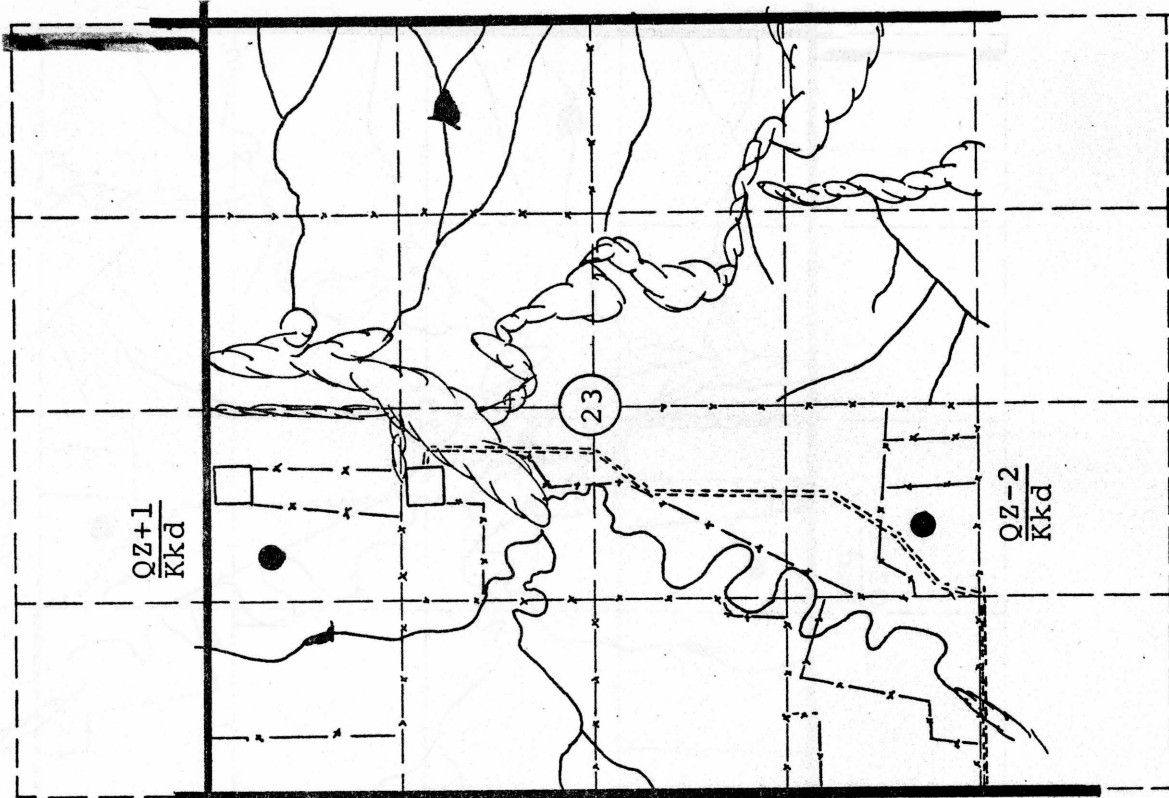
Site No. QZ-2 Date September 1965
Kkd
 Material "Quartzite" County McpPherson
 Location SW $\frac{1}{4}$ Sec. 23 Twp. 18S Range 2W
 Owner Guy E. Finkle 1125 E. Kansas, McPherson, Kansas
 name address
 Nature of Deposit DRY Accessibility Fair
 Status of Site Open site; not sampled

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 SURVEY REPORT

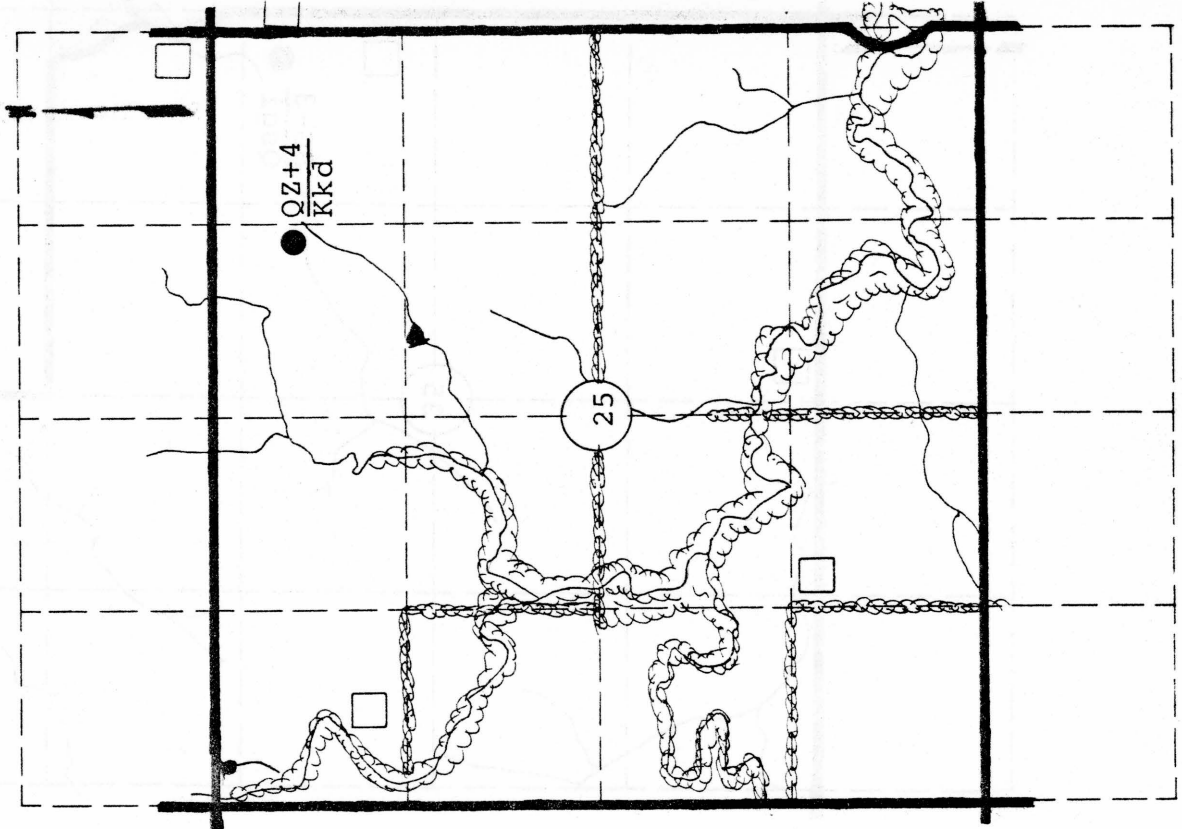
Site No. QZ+4 Date September 1965
Kkd
 Material "Quartzite" County McPherson
 Location NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 25 Twp. 17S Range 2W
 Owner Francis L. Anderson R.R. 1, Gypsum, Kansas
Dry address
 Nature of Deposit Dry Accessibility POOR
 Status of Site Open site; not sampled

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 SURVEY REPORT

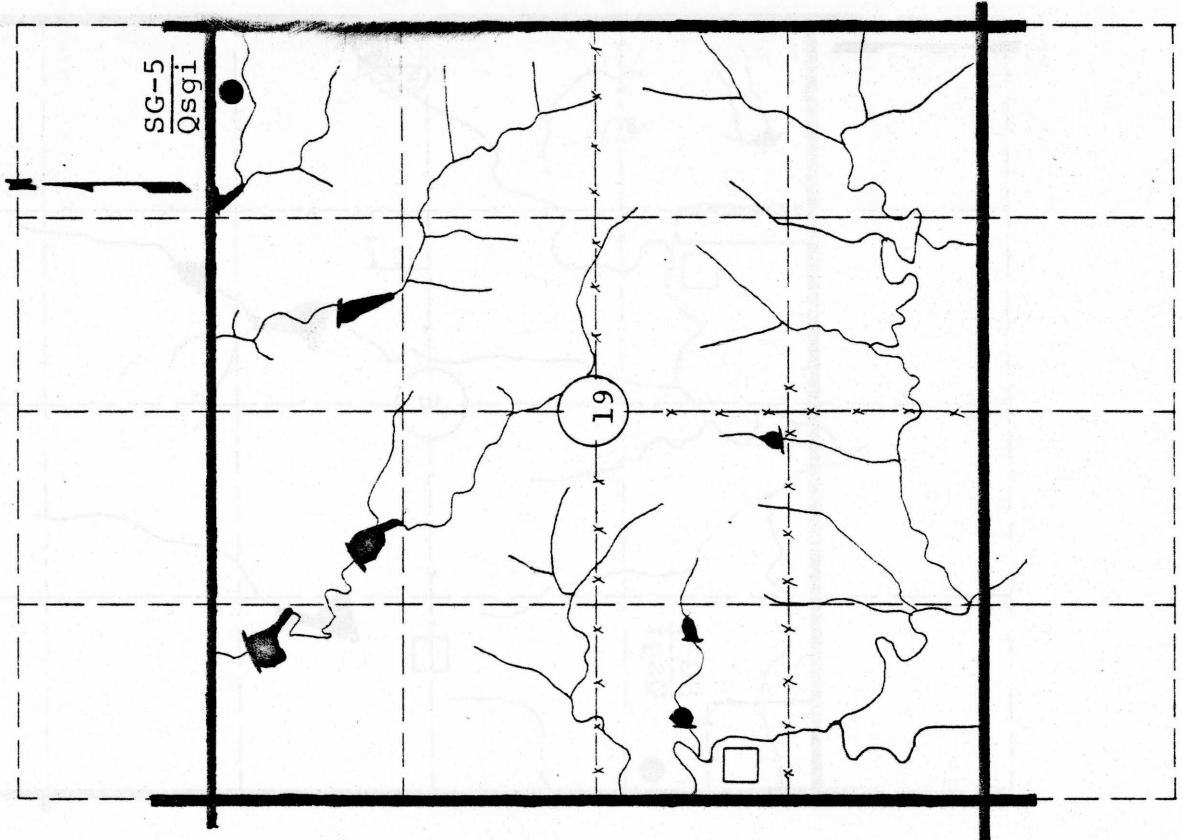
Site No. SG-5 Date September 1955
Qsg1
 Material Sand & Gravel County McPherson
 Location NE 1/4 NE 1/4 Sec. 19 Twp. 17S Range 2W
 Owner Anna M. Reese R. R. 1, Gypsum, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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 Grand Island Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks This material is composed mostly of ironstone and limestone gravel.



SG-5
Qsg1

Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

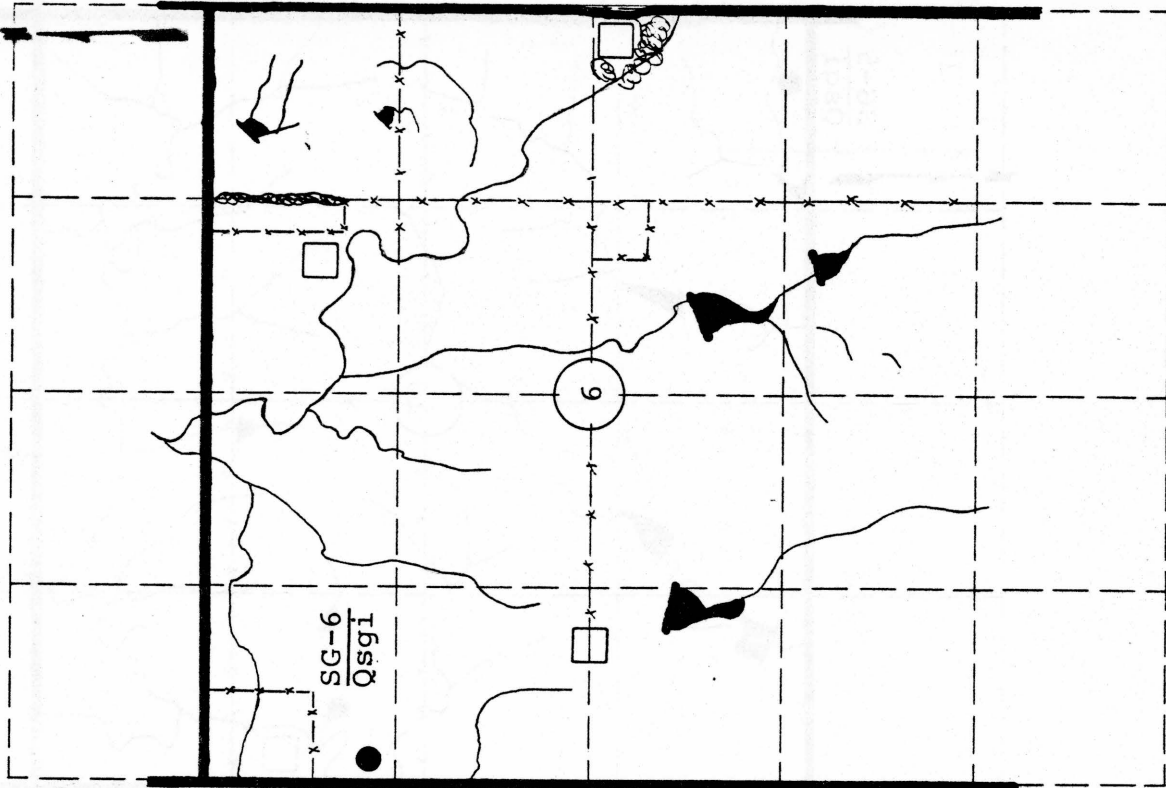
SG-6
Qsgl
 Site No. _____ Date September 1965
 Material Sand & Gravel County McPherson
 Location NW 1/4 Sec. 6 Twp. 17S Range 2W
 Owner W. T. Johnson 305 S. Main, Lindsborg, Kansas
 address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material 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 Grand Island Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks This material is composed mostly of ironstone and limestone gravel.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

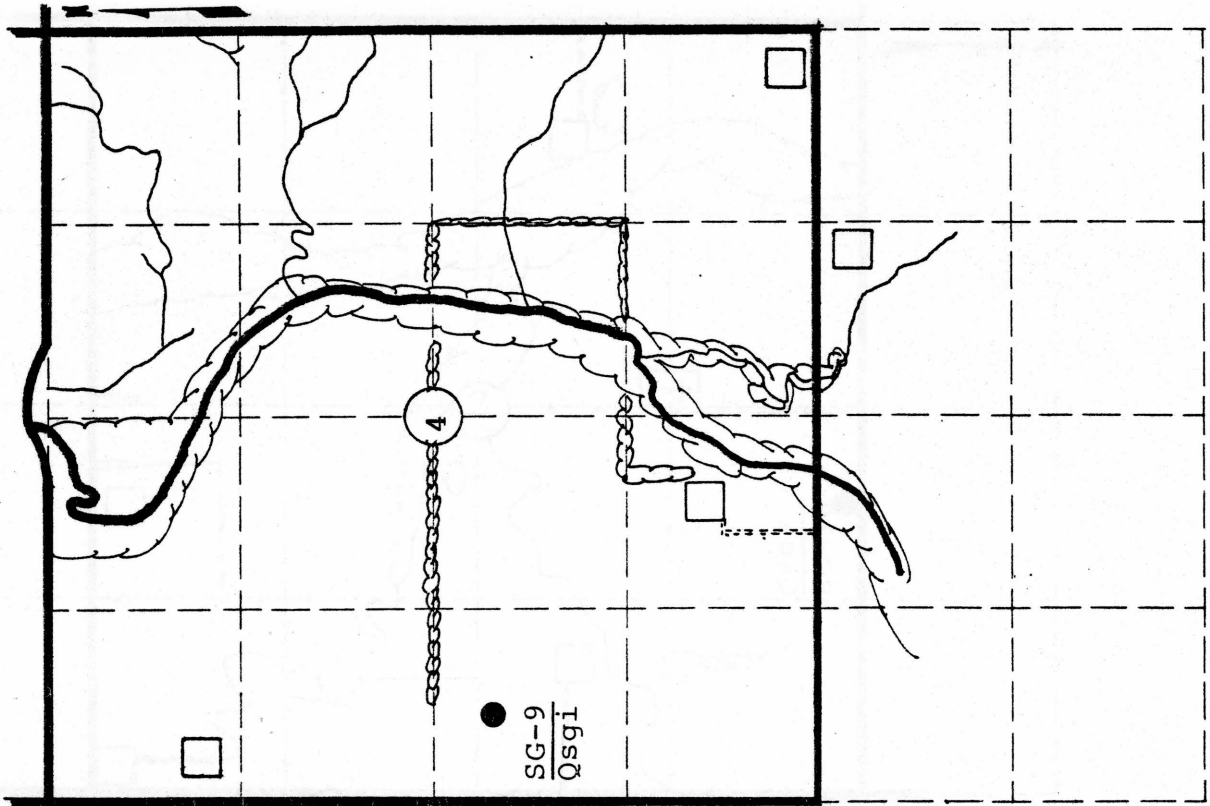
Site No. SG-9 Date September 1965
Qsgl
 Material Sand & Gravel County McPherson
 Location SW $\frac{1}{4}$ Sec. 4 Twp. 17S Range 1W
 Owner Milan L. Henne Gypsum, Kansas
 address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island Formation
 Material Similar to _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Co.Ft. _____ Str. Ratio _____
 Remarks This material is composed mostly of ironstone and limestone gravel.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

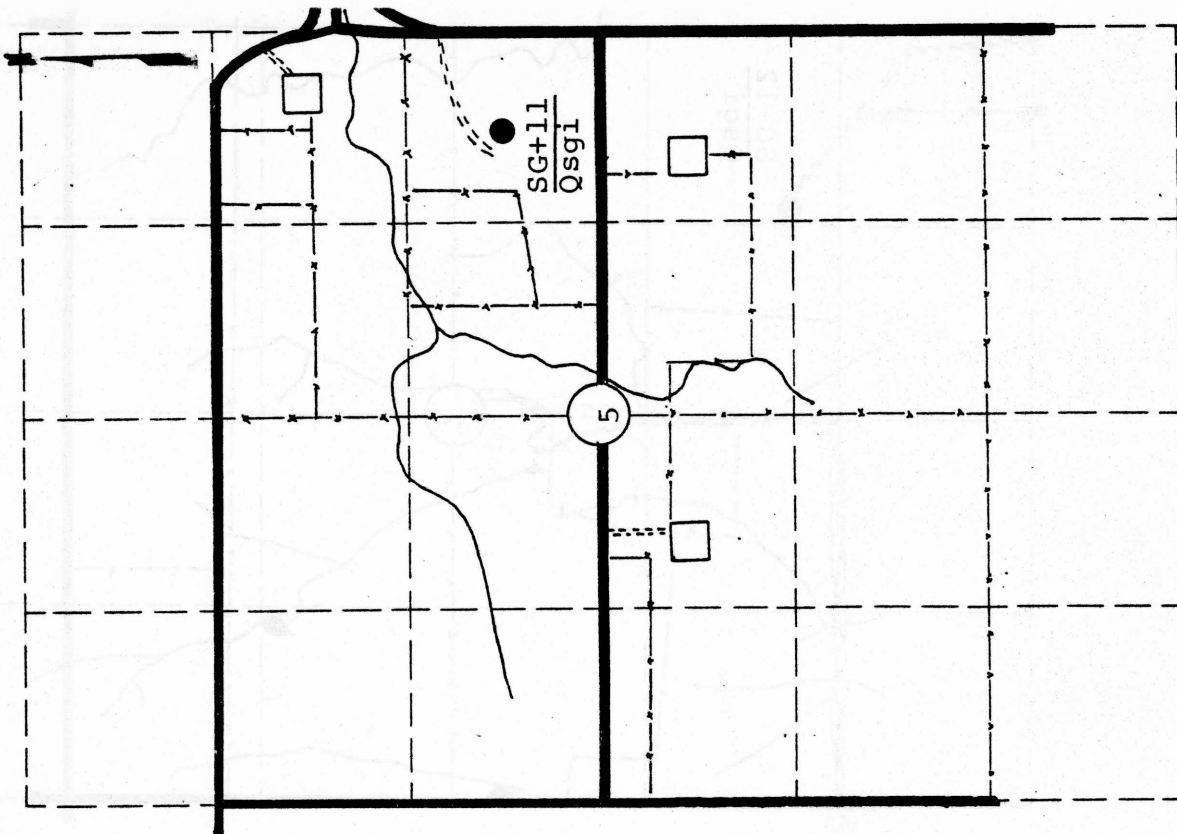
Site No. SG+11 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location SE 1/4 NE 1/4 Sec. 5 Twp. 18S Range 4W
 Owner Amos E. Dahlston Margquette, Kansas
name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material 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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island 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 SURVEY REPORT

SG+12
Qsg1
 Site No. _____ Date September 1965
 Material Sand & Gravel County McPherson
 Location NE 1/4 NE 1/4 Sec. 7 Twp. 18S Range 4W
 Owner J. C. Darrah et al. 623 E. Kansas, McPherson, Kans.
 address
 Nature of Deposit Dry Accessibility Good

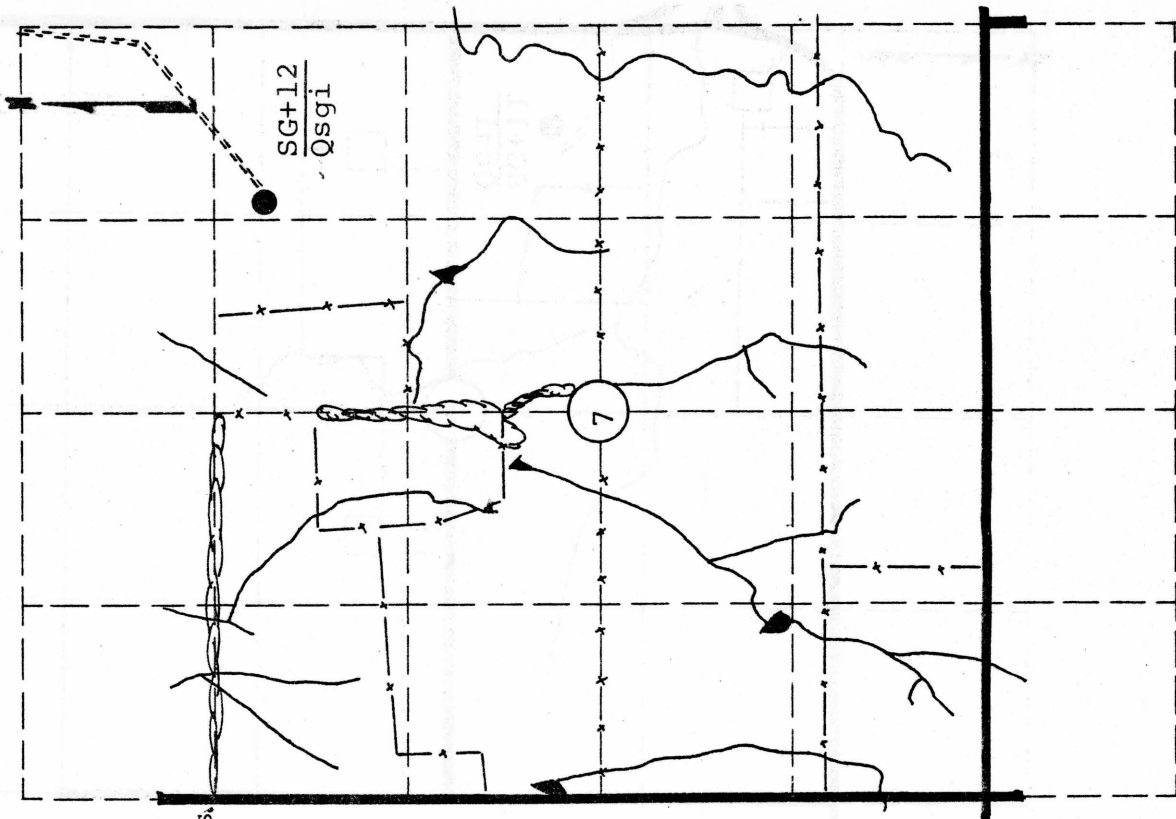
Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material 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 Grand Island 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 SURVEY REPORT

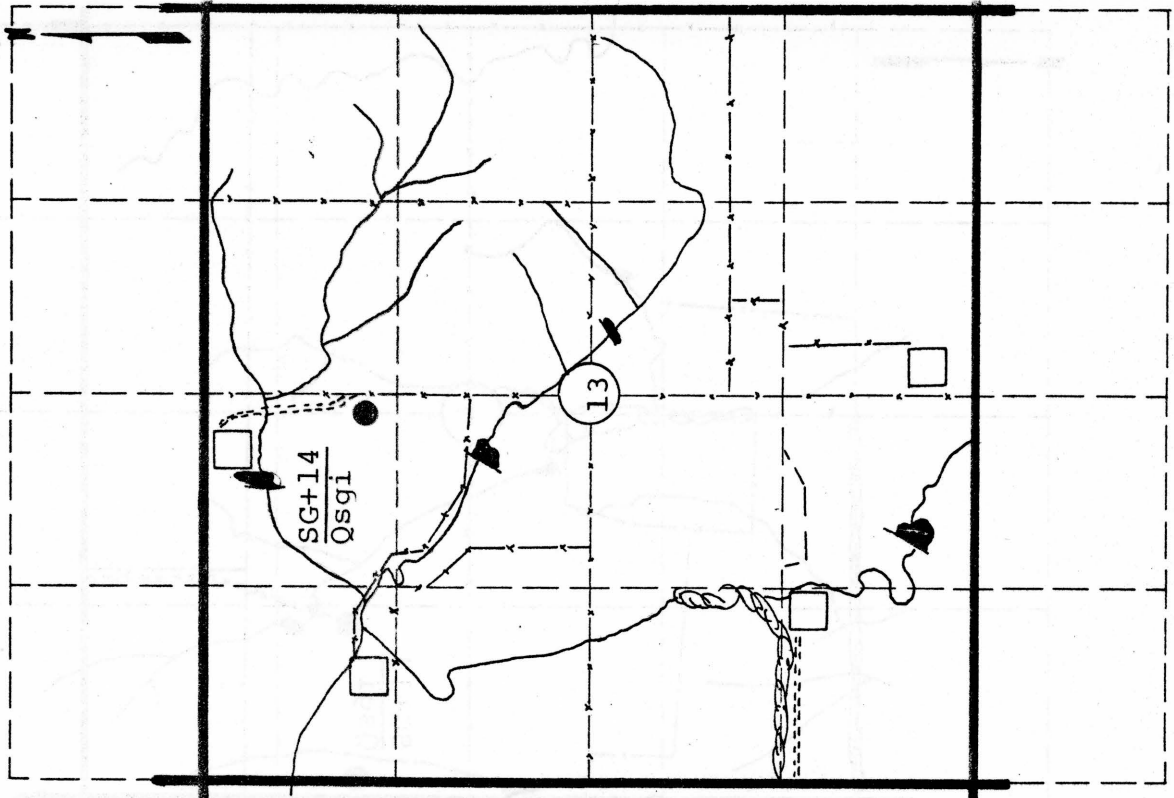
Site No. SG+14 Date September 1965
Qsgl
 Material Sand & Gravel County McPherson
 Location NE 1/4 NW 1/4 Sec. 13 Twp. 18S Range 5W
 Owner Charles A. Petterson R. R. 3, McPherson, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of site Open site; not sampled

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 Grand Island Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SURVEY REPORT

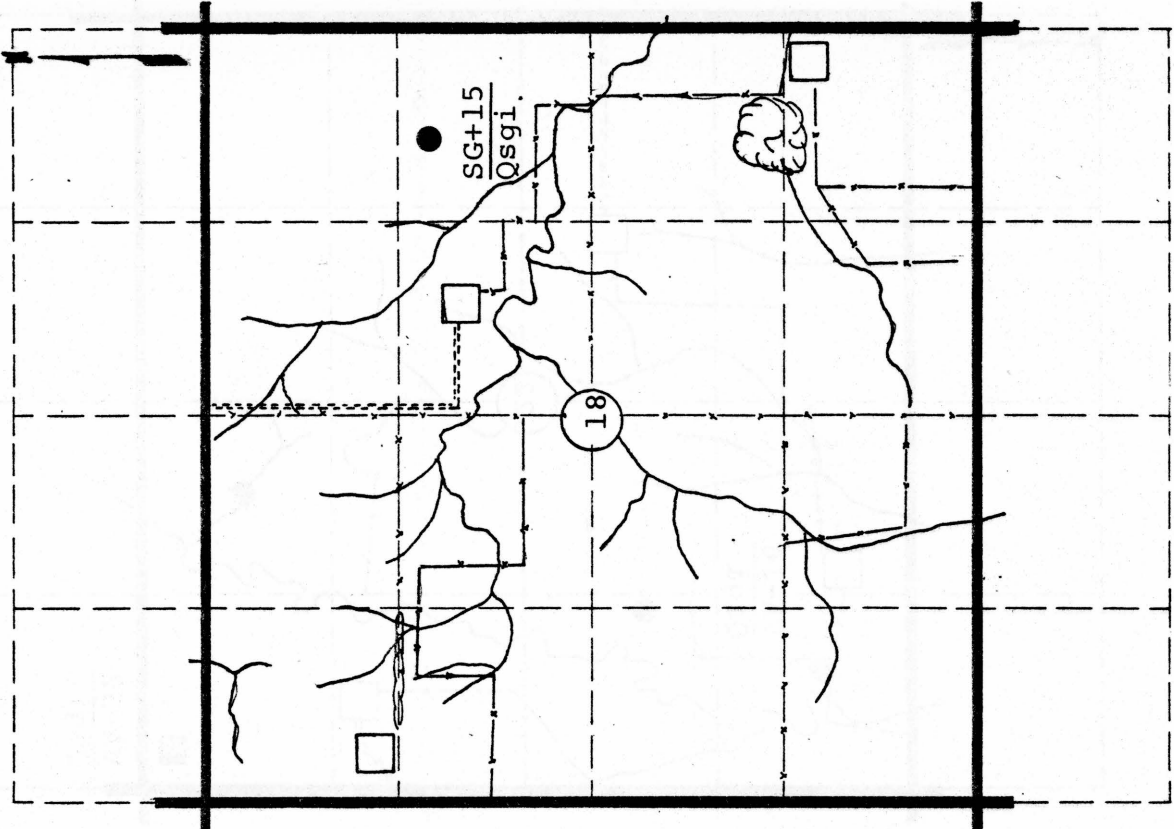
Site No. SG+15 Date September 1965
Qsg1
 Material Sand & Gravel county MCPHERSON
 Location SE 1/4 NE 1/4 Sec. 18 Twp. 18S Range 4W
 Owner Clarence B. Nelson R. R. 1, Marquette, Kansas
name address
 Nature of Deposit Dry Accessibility Fair
 Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Material 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						

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island 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 SURVEY REPORT

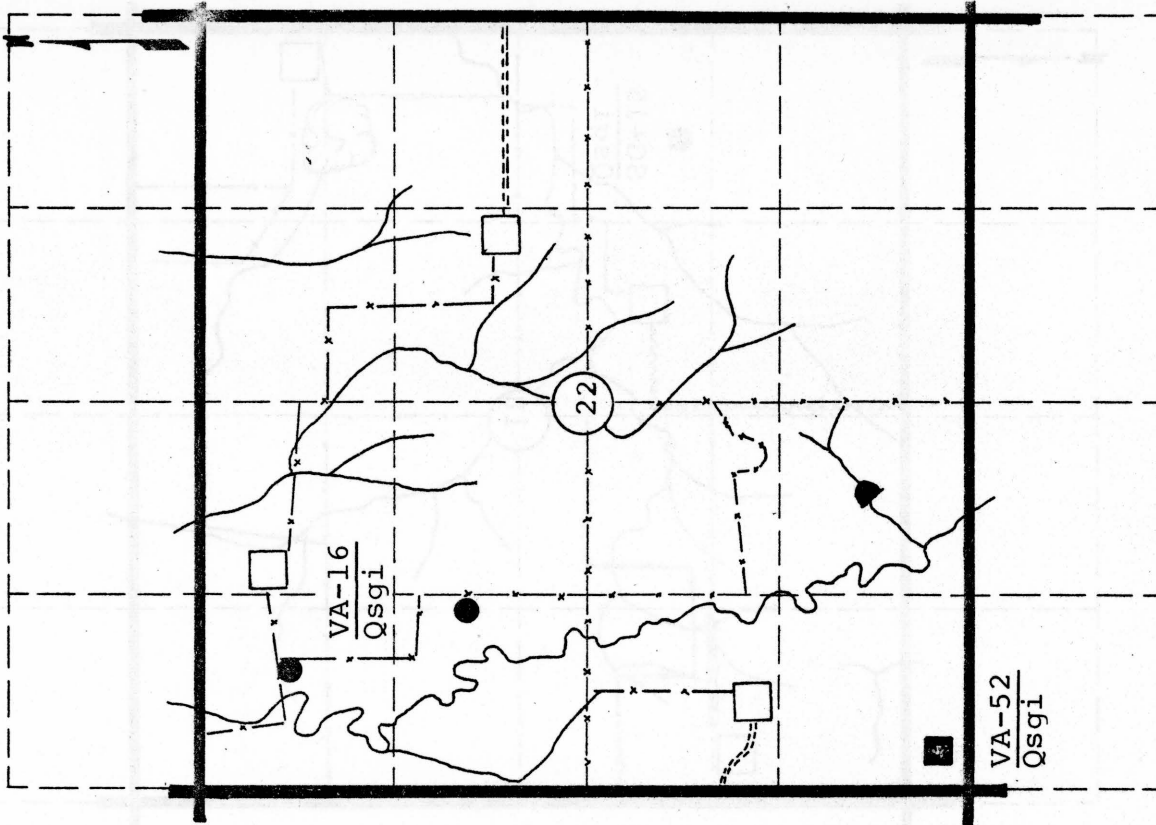
Site No. VA-16 Date September 1965
Qsgi
 Material Volcanic Ash County McPherson
 Location NW 1/4 Sec. 22 Twp. 18S Range 4W
 Owner John F. Larson Est. R. R. 3, McPherson, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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 Sappa Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

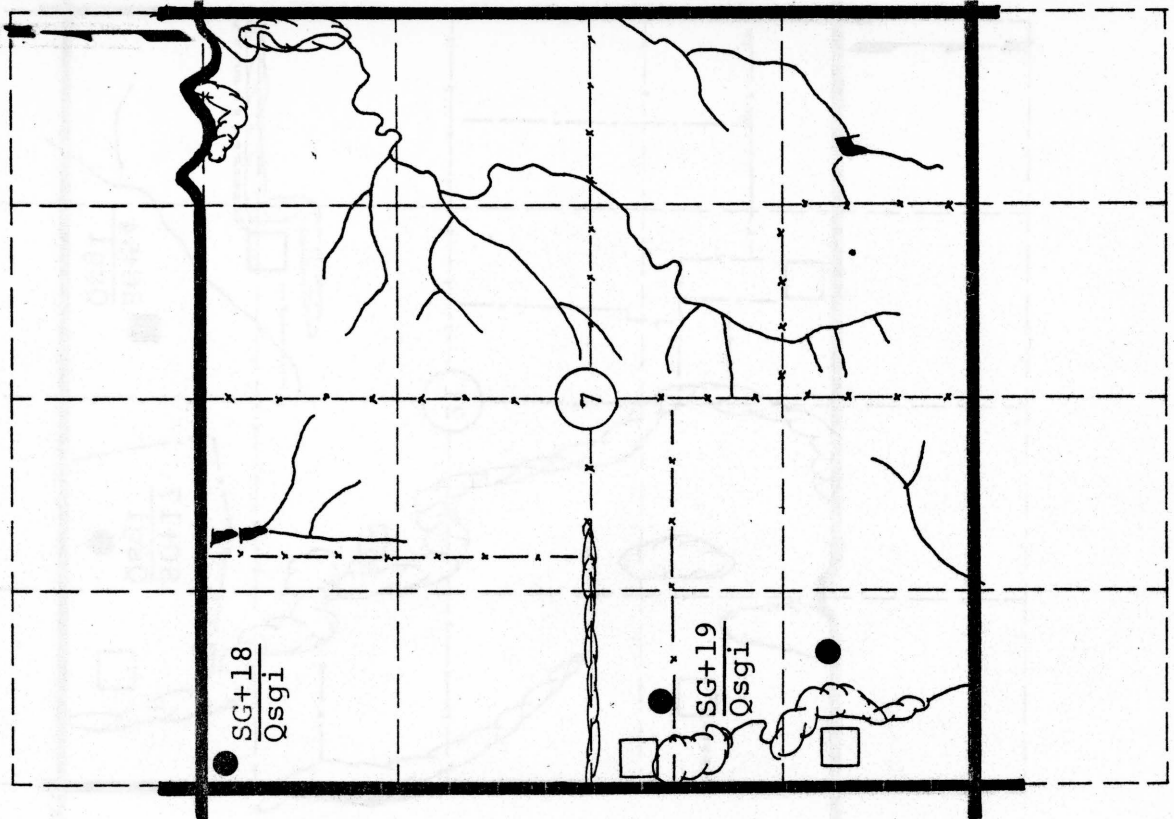
Site No. SG+18 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location NW 1/4 NW 1/4 Sec. 7 Twp. 18S Range 3W
 Owner Marie E. Maim R. R. 3, McPherson, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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 Grand Island Formation
 Material Similar To _____
 Specific Gravity (Set.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

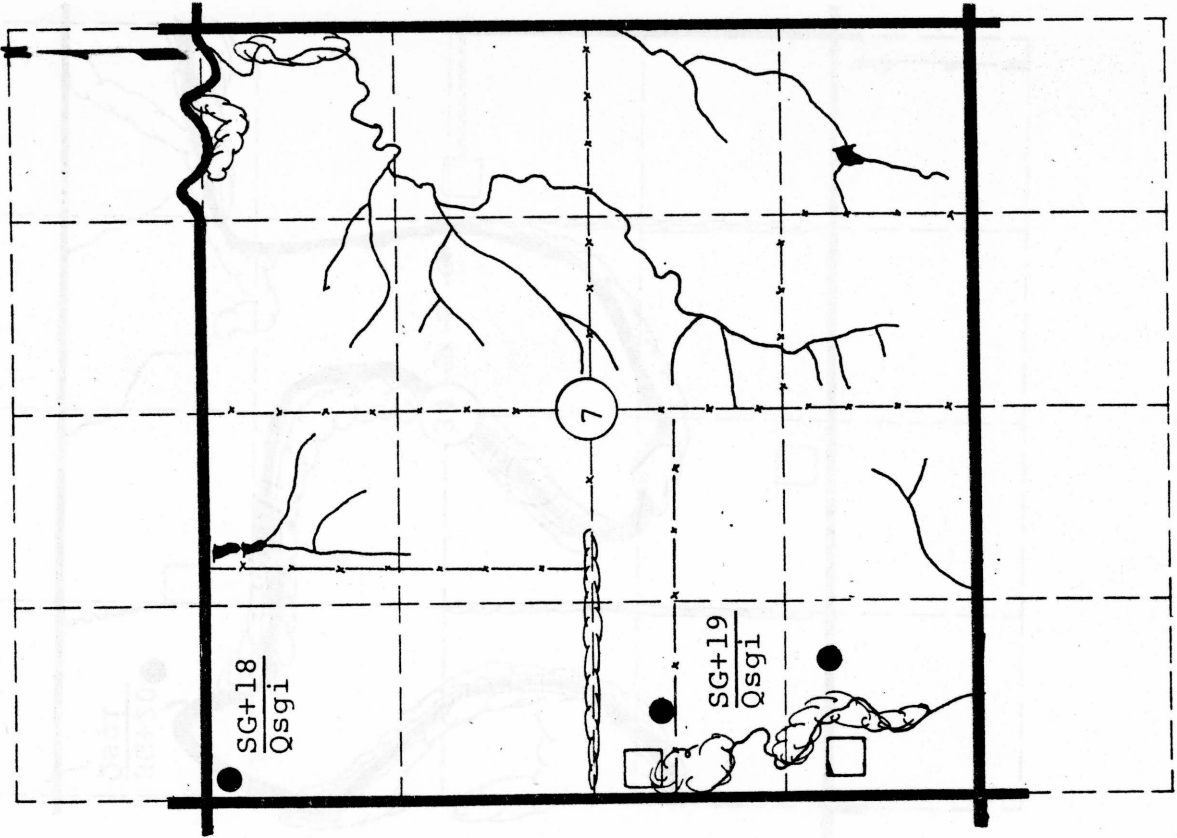
Site No. SG+19 Date September 1965
Qsgi
 Material Sand & Gravel County McPherson
 Location SW $\frac{1}{4}$ Sec. 7 Twp. 18S Range 3W
 Owner Donald A. Heline R. R. 3, McPherson, Kansas
name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	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 Quaternary
 Geological Source Grand Island Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Mt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

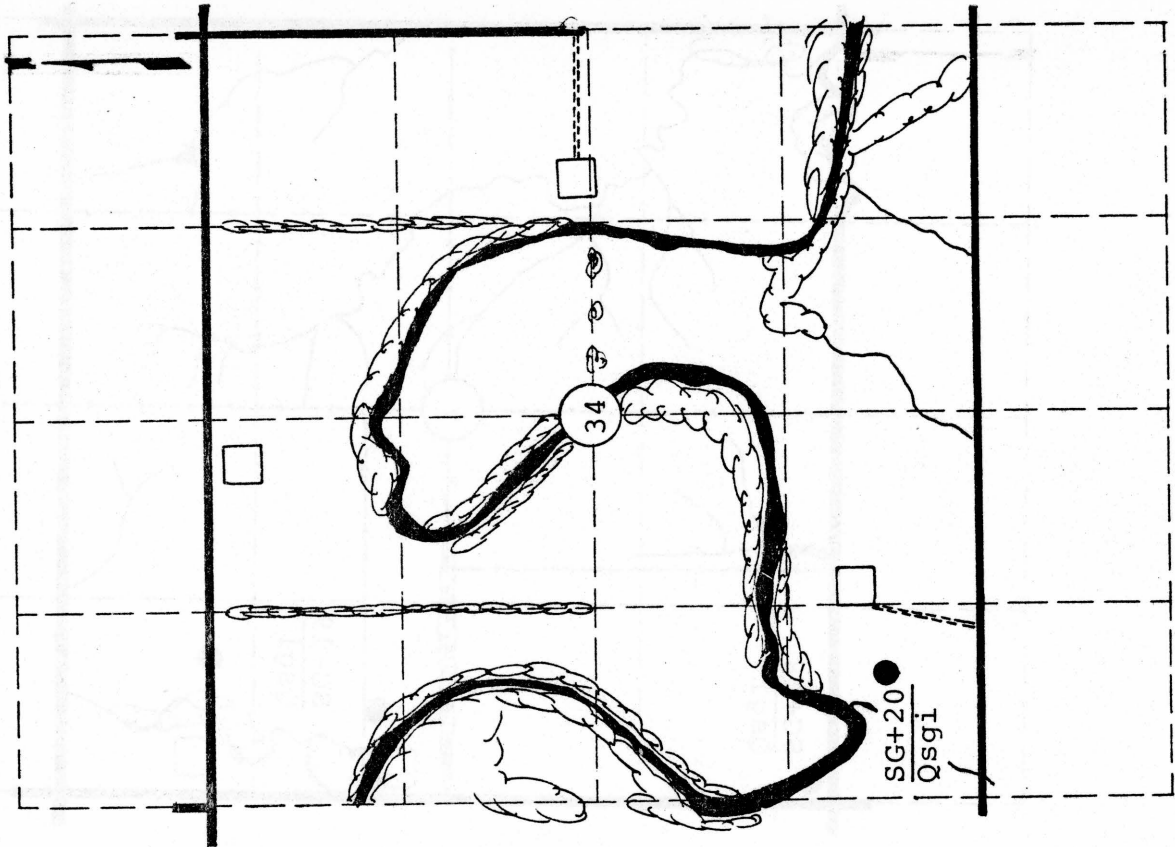
Site No. SG+20 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location SW 1/4 SW 1/4 Sec. 34 Twp. 17S Range 4W
 Owner Lenus Sundeen R. R. 2, Lindsborg, Kansas
 name address
 Nature of Deposit Dry Accessibility Fair
 Status of Site Open site; not sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks Pit may be expanded eastward



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

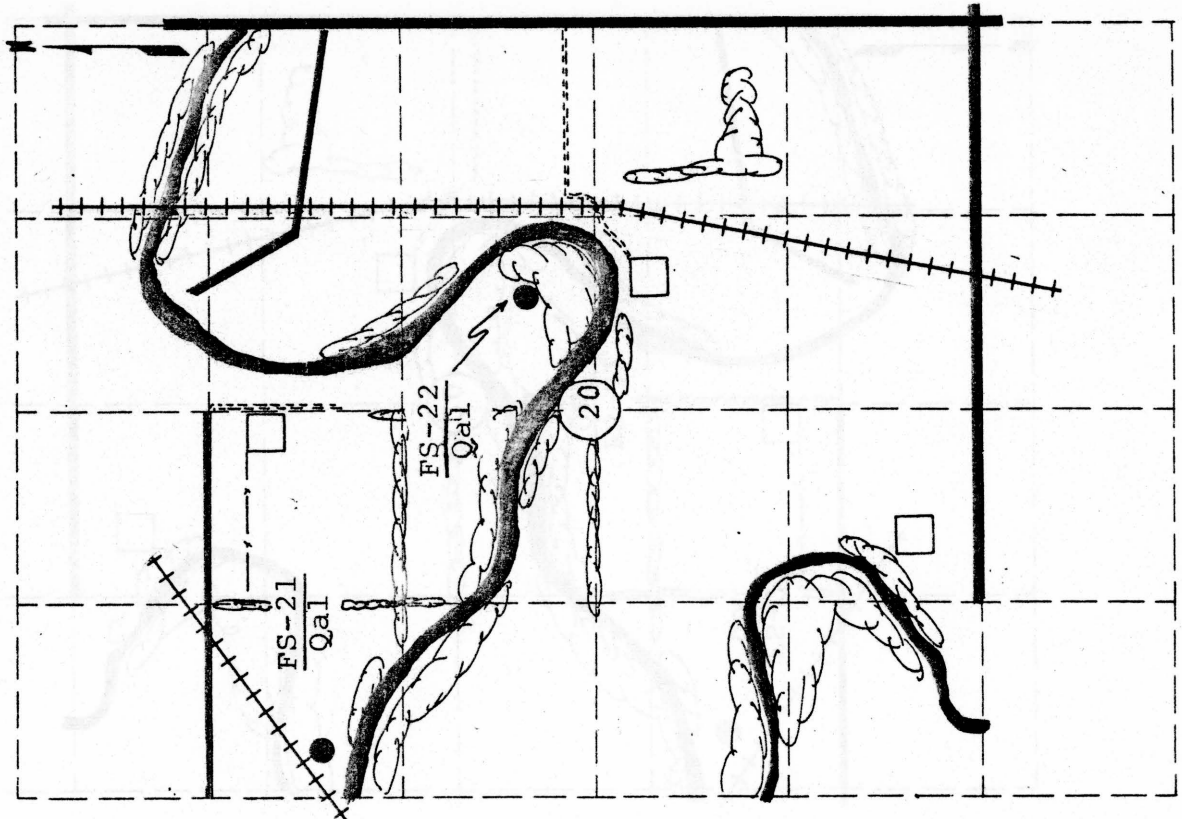
Site No. FS-21 Date September 1965
Qal
 Material Fine Sand County McPherson
 Location NW 1/4 Sec. 20 Twp. 17S Range 3W
 Owner Junior E. Anderson Lindsborg, Kansas
 Nature of Deposit Wet Accessibility Poor
 Status of Site Open site; not sampled

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	4	8					16

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 SURVEY REPORT

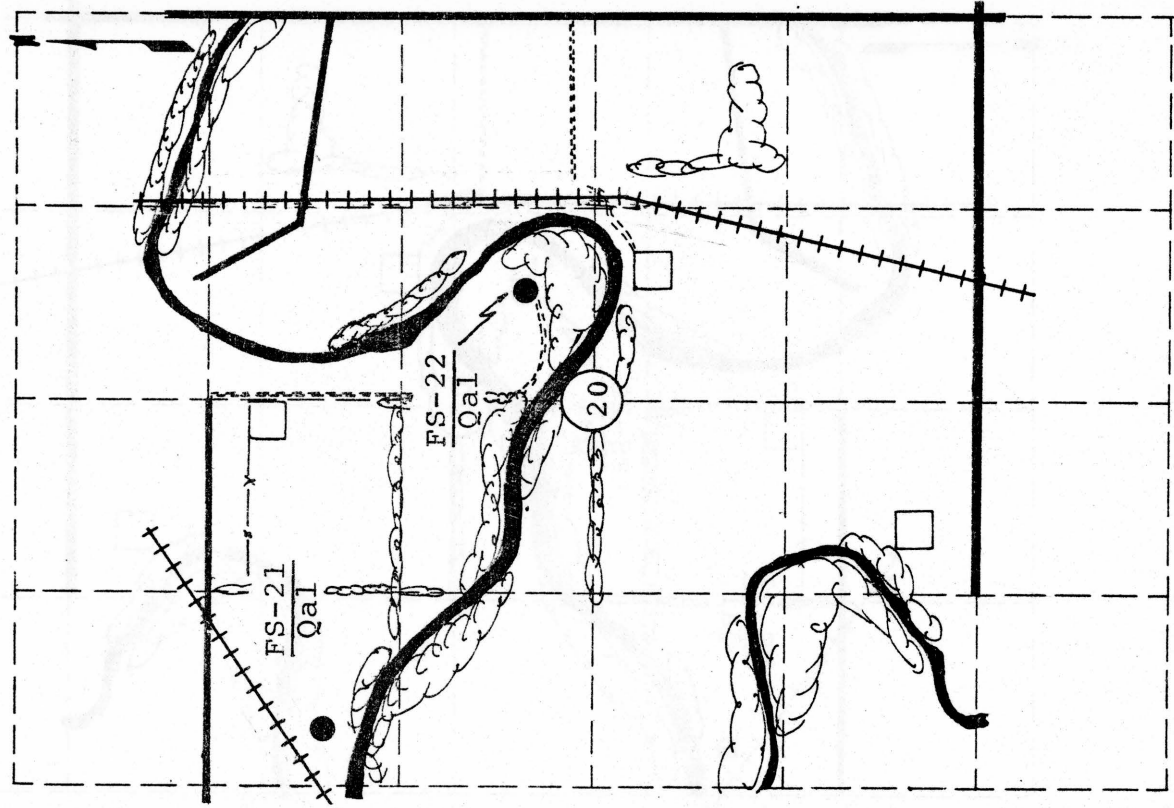
Site No. FS-22 Date September 1965
Qal
 Material Fine Sand County McPherson
 Location NE 1/4 Sec. 20 Twp. 17S Range 3W
 Owner F. C. Thomson Box 66, Lindsborg, Kansas
 name address
 Nature of Deposit Wet Accessibility Good
 Status of Site Open site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained							Mash 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 SURVEY REPORT

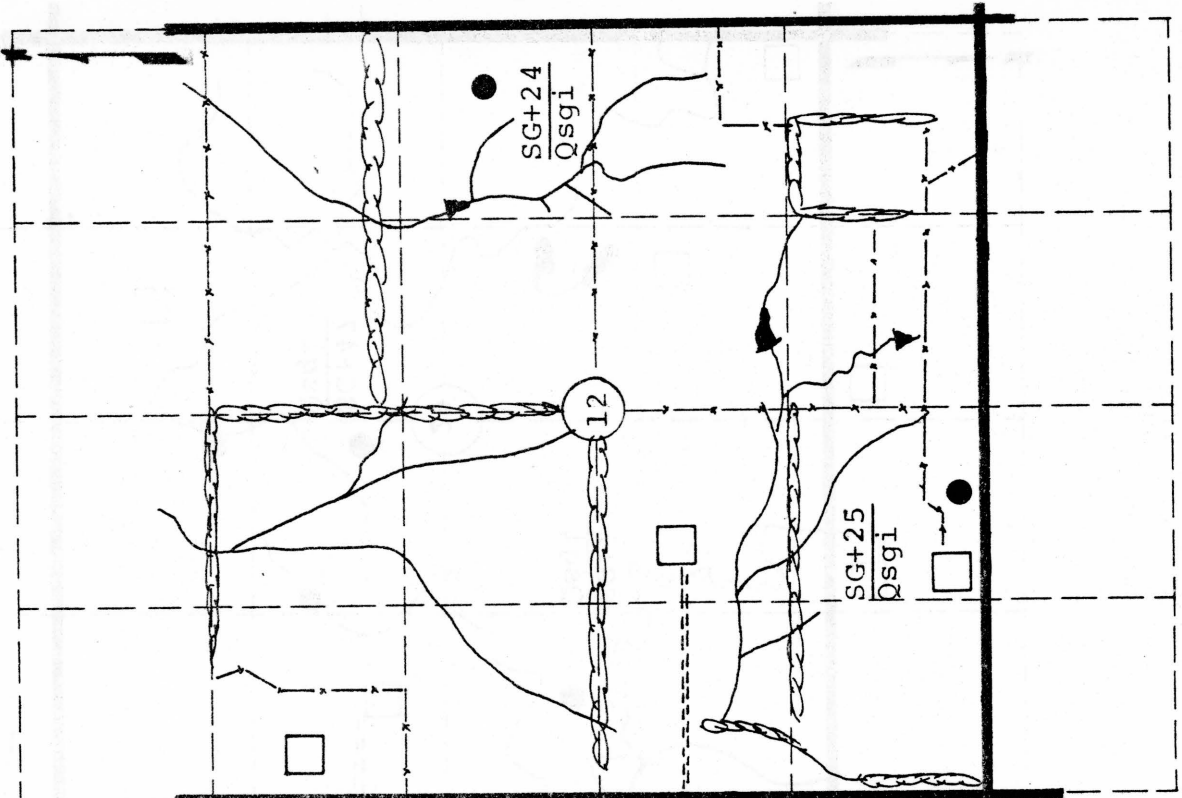
Site No. SG+24 Date September 1965
Qsgi
 Material Sand and Gravel County McPherson
 Location SE 1/4 NE 1/4 Sec. 12 Twp. 18S Range 5W
 Owner Ruth E. Maag 35368 Acacia Ave., Yucaipa, California
 name address
 Nature of Deposit DRY Accessibility Good
 Status of Site Open site; not sampled

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 Grand Island 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 SURVEY REPORT

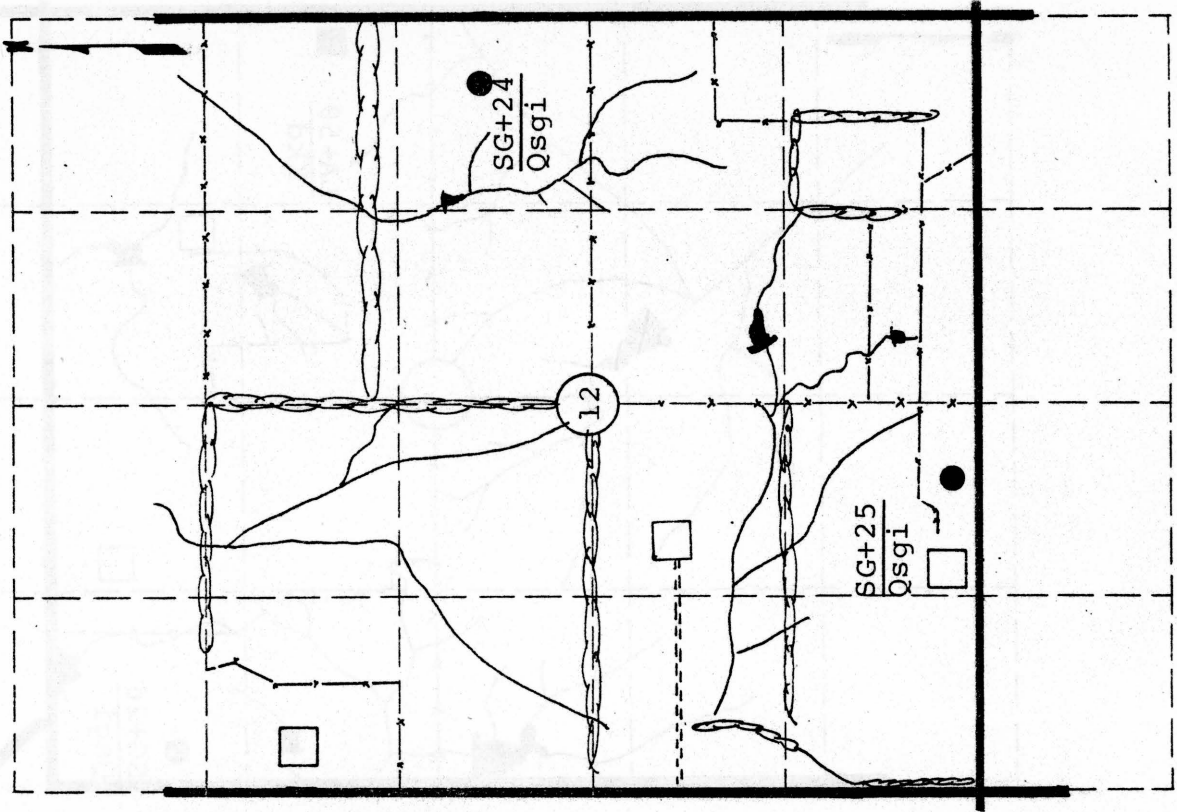
Site No. SG+25 Date September 1965
Qsgl
 Material Sand & Gravel County McPherson
 Location SE 1/4 SW 1/4 Sec. 12 Twp. 18S Range 5W
 Owner R. H. Haywood Marquette, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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 Grand Island 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 SURVEY REPORT

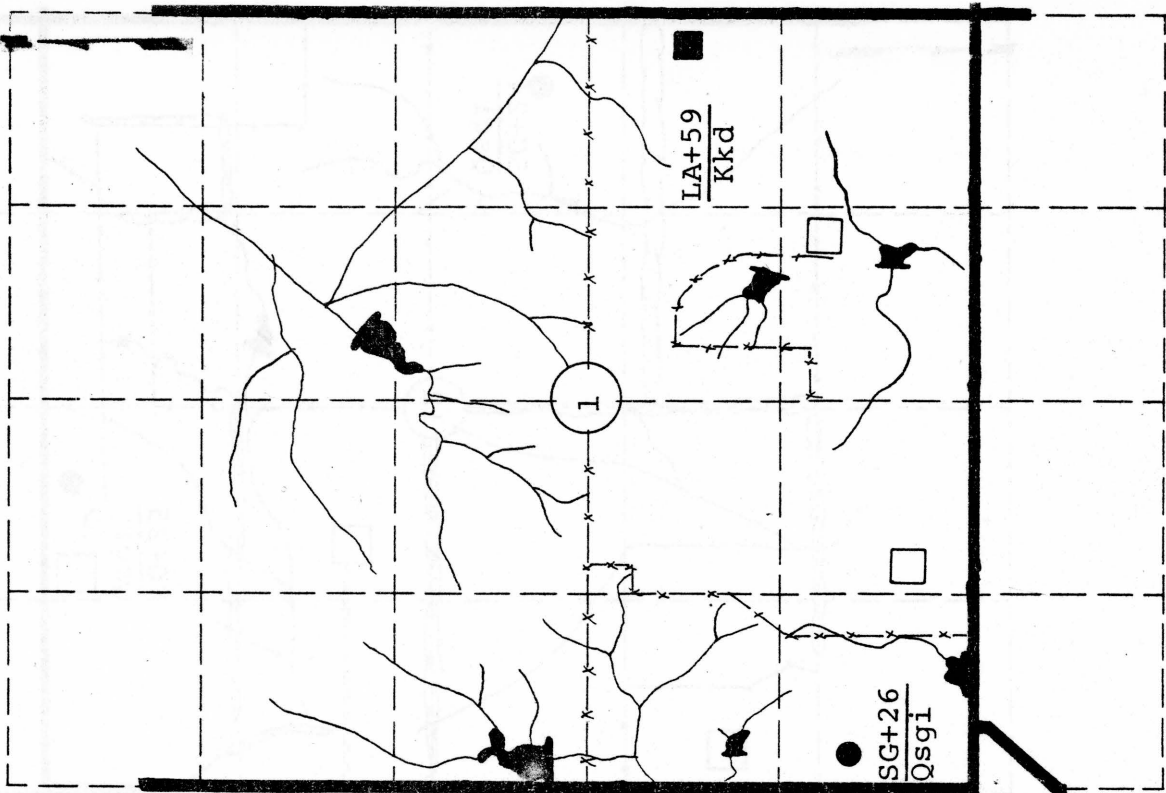
Site No. SG+26 Date September 1965
Qsgi
 Material Sand & Gravel County McPherson
 Location SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 1 Twp. 17S Range 5W
 Owner John Oscar Patrick Marquette, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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 Grand Island Formation
 Material Similar to _____
 Specific Gravity (Sat.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



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

MATERIAL SURVEY REPORT

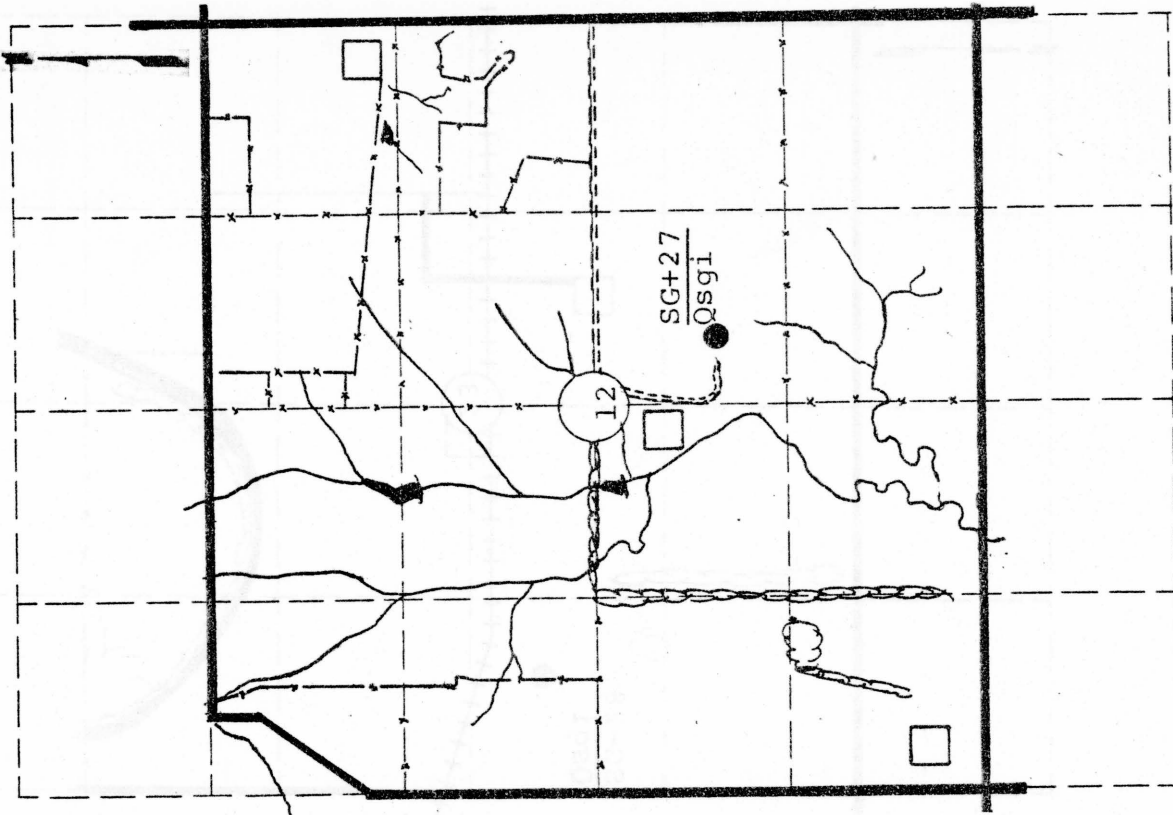
Site No. SG+27 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location SE 1/4 Sec. 12 Twp. 17S Range 5W
 Owner John Oscar Patrick Marquette, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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 Grand Island 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 SURVEY REPORT

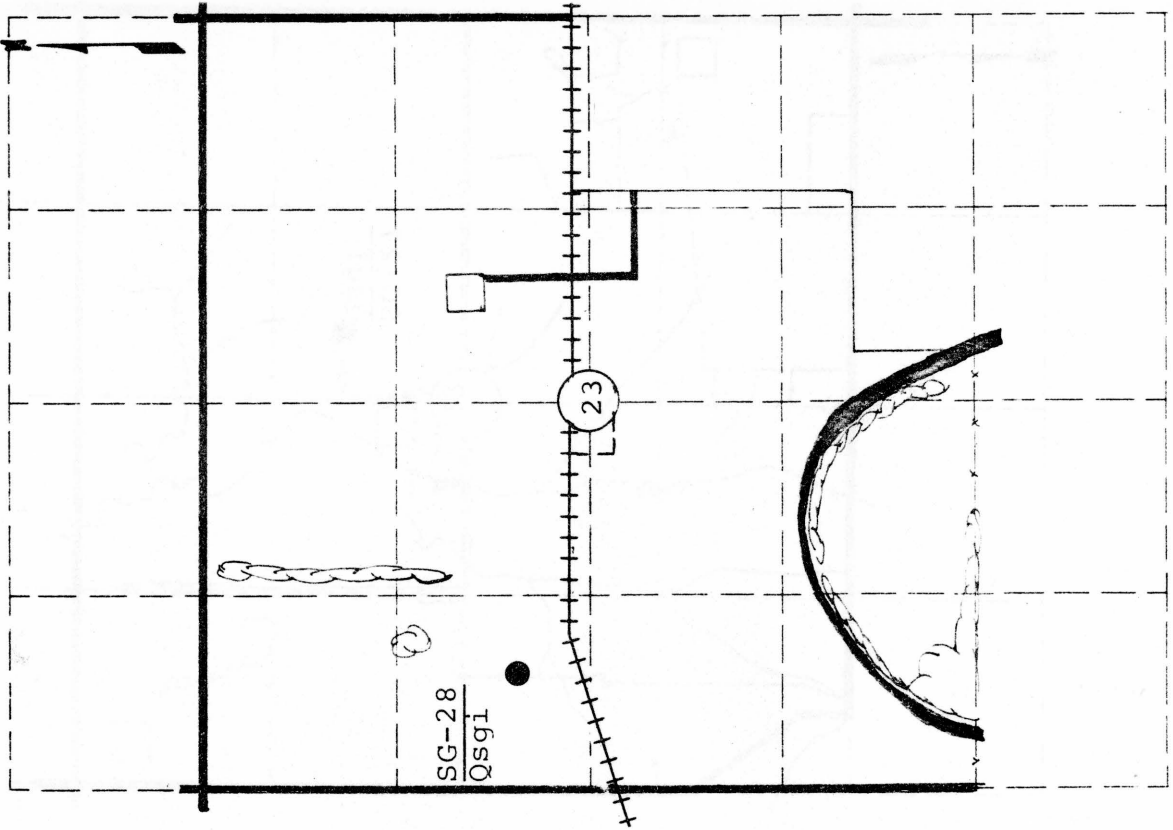
Site No. SG-28 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location NW $\frac{1}{4}$ Sec. 23 Twp. 17S Range 5W
 Owner Arnold C. Akerson R. R. 2, Galva, Kansas
 name address
 Nature of Deposit Dry Accessibility Fair
 Status of Site Open site; not sampled

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 Grand Island Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.ft. _____ Str. Ratio _____
 Remarks This pit is now being used for a city dump.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

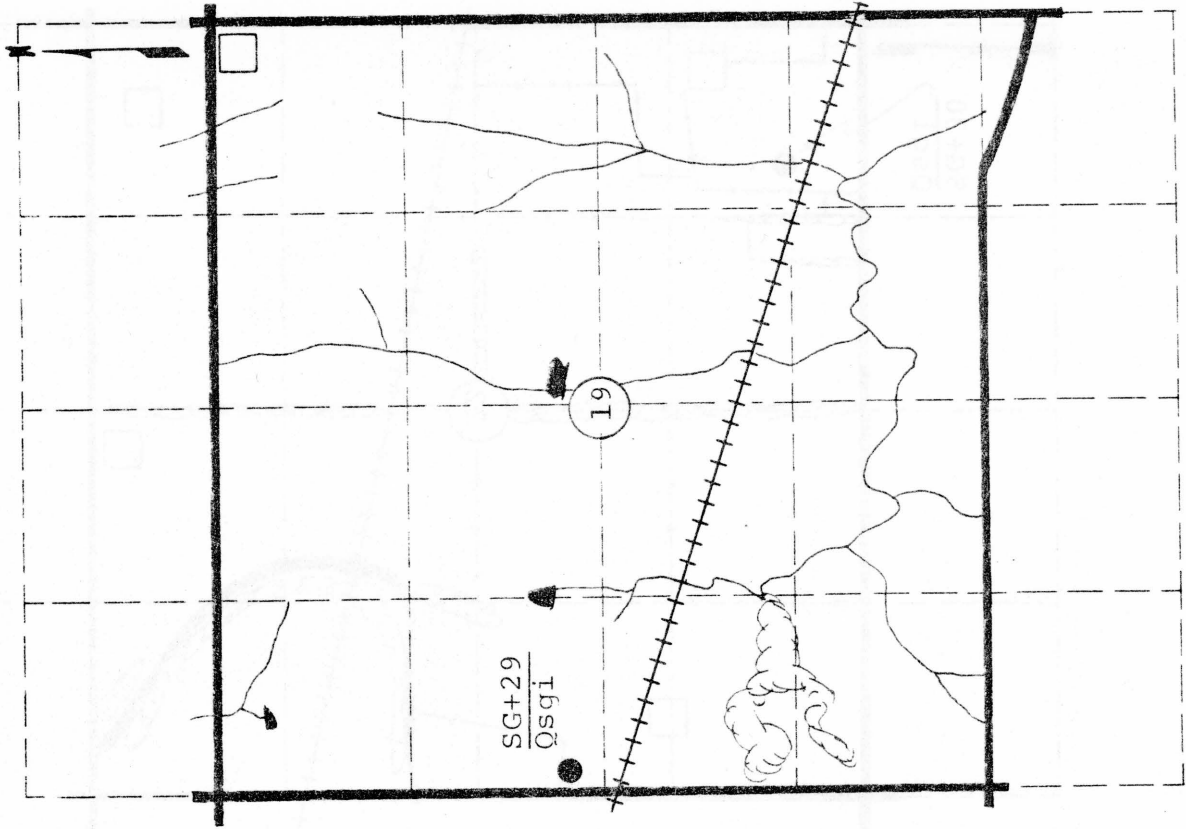
Site No. SG+29 Date September 1965
Qsgi
 Material Sand & Gravel County McPherson
 Location NW $\frac{1}{4}$ Sec. 19 Twp. 17S Range 5W
 Owner Chester R. Peterson Marquette, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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 Grand Island 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 SURVEY REPORT

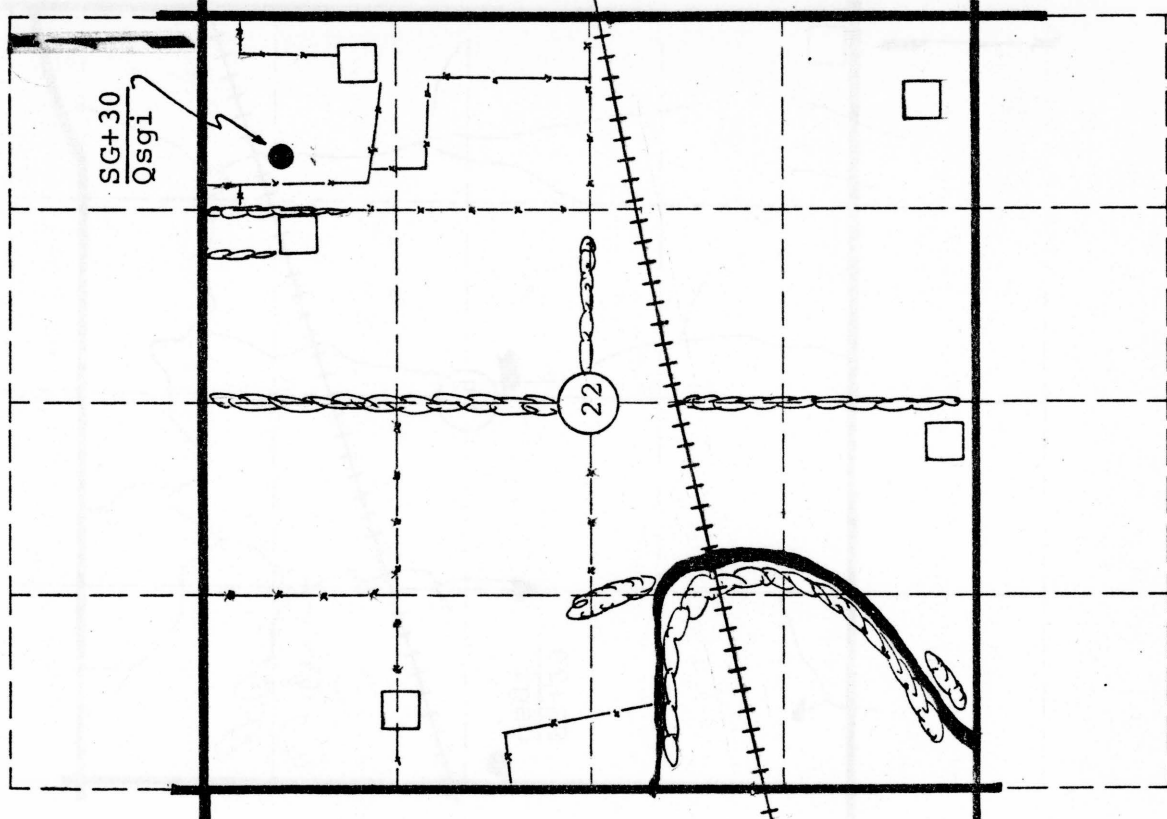
Site No. SG+30 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location NE 1/4 Sec. 22 Twp. 17S Range 5W
 Owner Clifford B. Swanson Smolan, Kansas
 name address
 Nature of Deposit DRY Accessibility Good
 Status of Site Open site; not sampled

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 Grand Island Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SURVEY REPORT

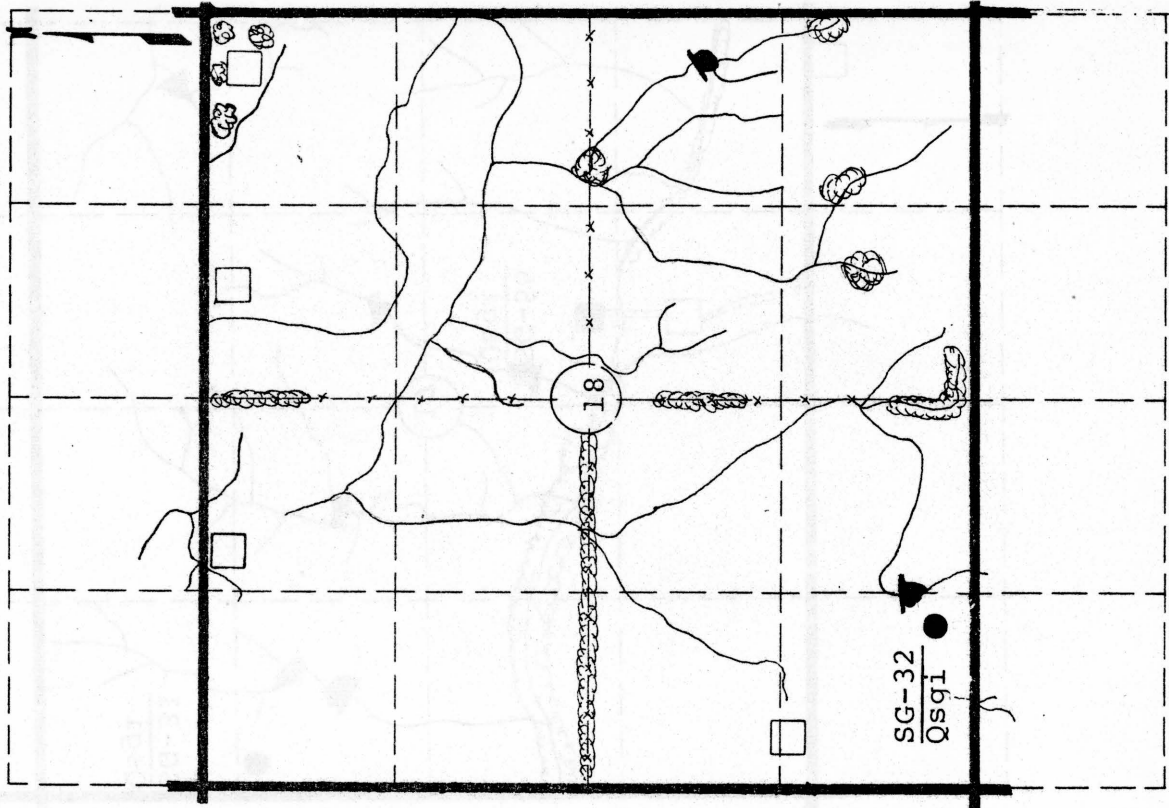
Site No. SG-32 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location SW 1/4 SW 1/4 Sec. 18 Twp. 17S Range 5W
 Owner C. A. Nelson R. R. 1, Marquette, Kansas
name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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	4	8	16	30					50	100	200			

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island 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 SURVEY REPORT

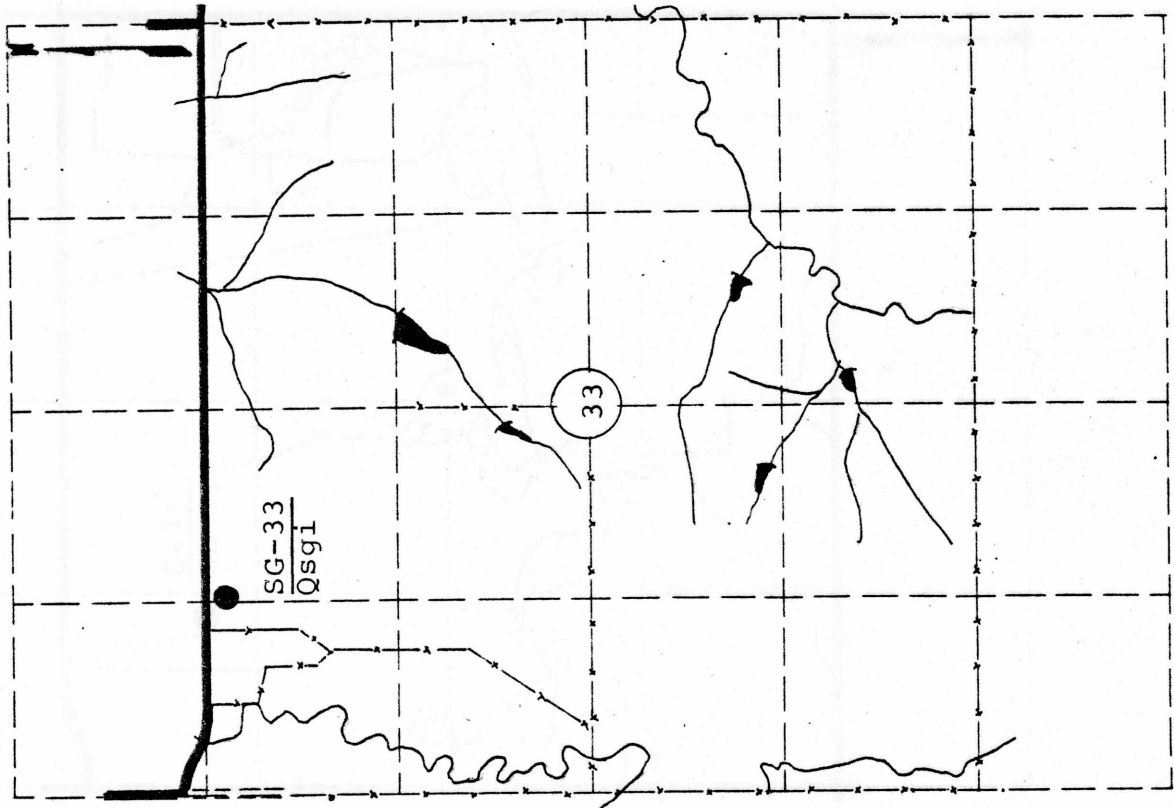
Site No. SG-33 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location NW¹/₄ Sec. 33 Twp. 17S Range 5W
Chester Lindstrom et al. Marquette, Kansas
 Owner Chester Lindstrom et al. Marquette, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not 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 Grand Island Formation
 Material Similar to _____
 Specific Gravity (sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



MATERIAL SURVEY REPORT

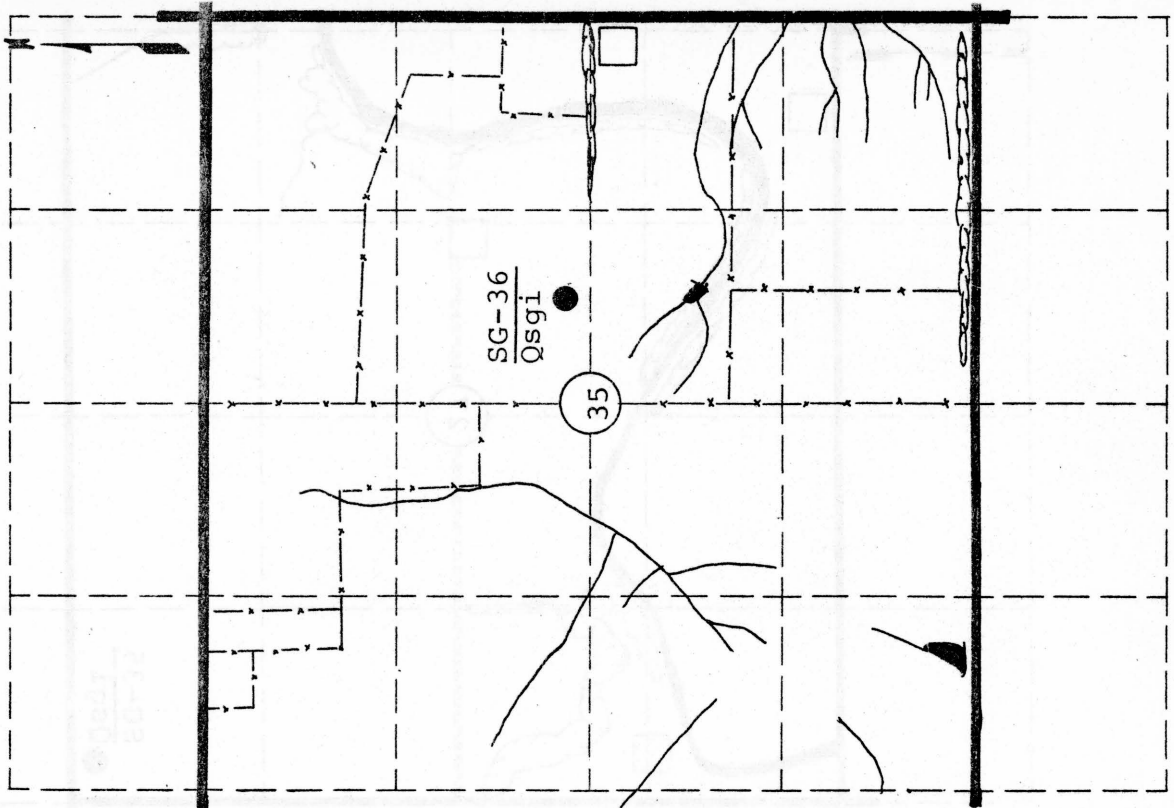
Site No. SG-36 Date September 1965
Qsgl
 Material Sand & Gravel County McPherson
 Location SW 1/4 NE 1/4 Sec. 35 Twp. 17S Range 5W
 Owner See Remarks Below. address _____
 Nature of Deposit Dry Accessibility Poor
 Status of Site Open site; not sampled

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

CORRELATION DATA

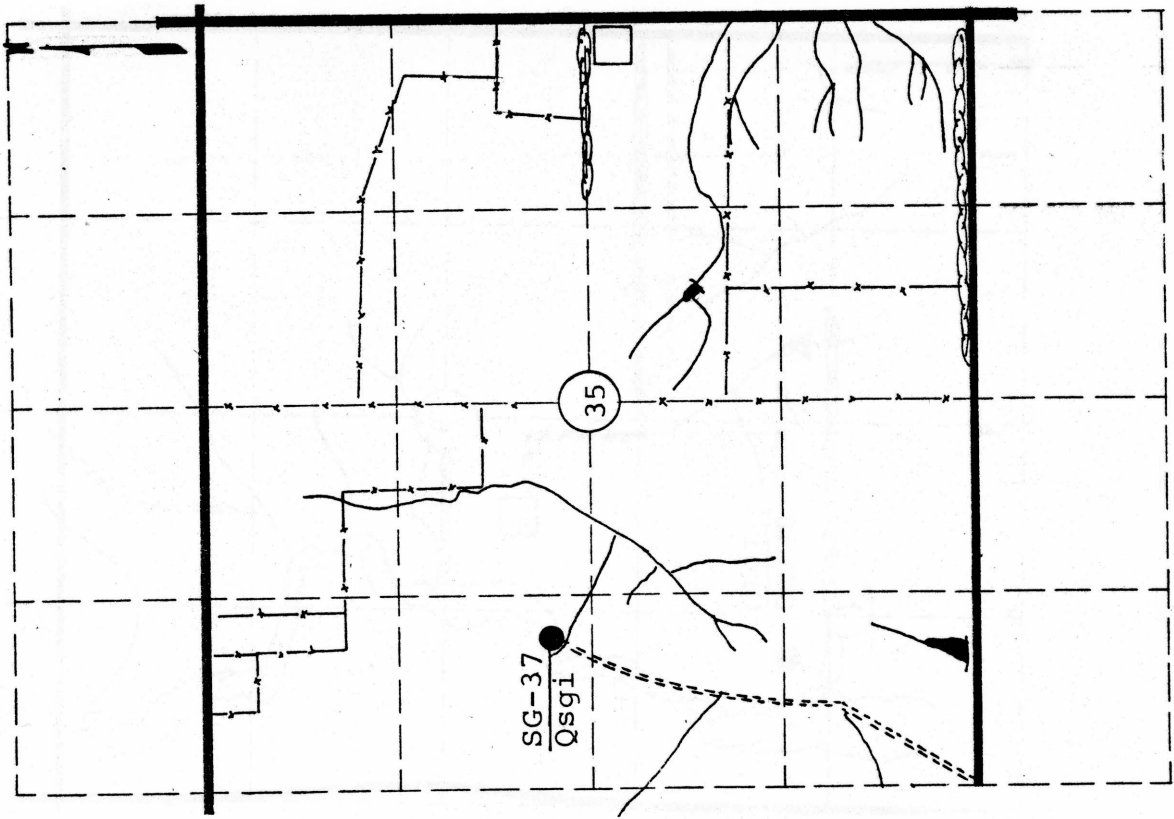
Geological Age Quaternary
 Geological Source Grand Island Formation
 Material Similar To _____
 Specific Gravity (sat.) _____ (dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Owner: Charles D. Johnson et al.
% Ernest Johnson, Marquette, Kansas



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

Site No. SG-37 Date September 1965
Qsgi County McPherson
 Material Sand & Gravel
 Location SW 1/4 NW 1/4 Sec. 35 Twp. 17S Range 5W
 Owner Percy V. Peterson R. R. 1, Marquette, Kansas
 name address
 Nature of Deposit Dry Accessibility Fair
 Status of Site Open site; not 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	G.F.	L.L.	P.I.	
				1/2	3/4	3/8	4	8	16	30					50

CORRELATION DATA

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

MATERIAL SURVEY REPORT

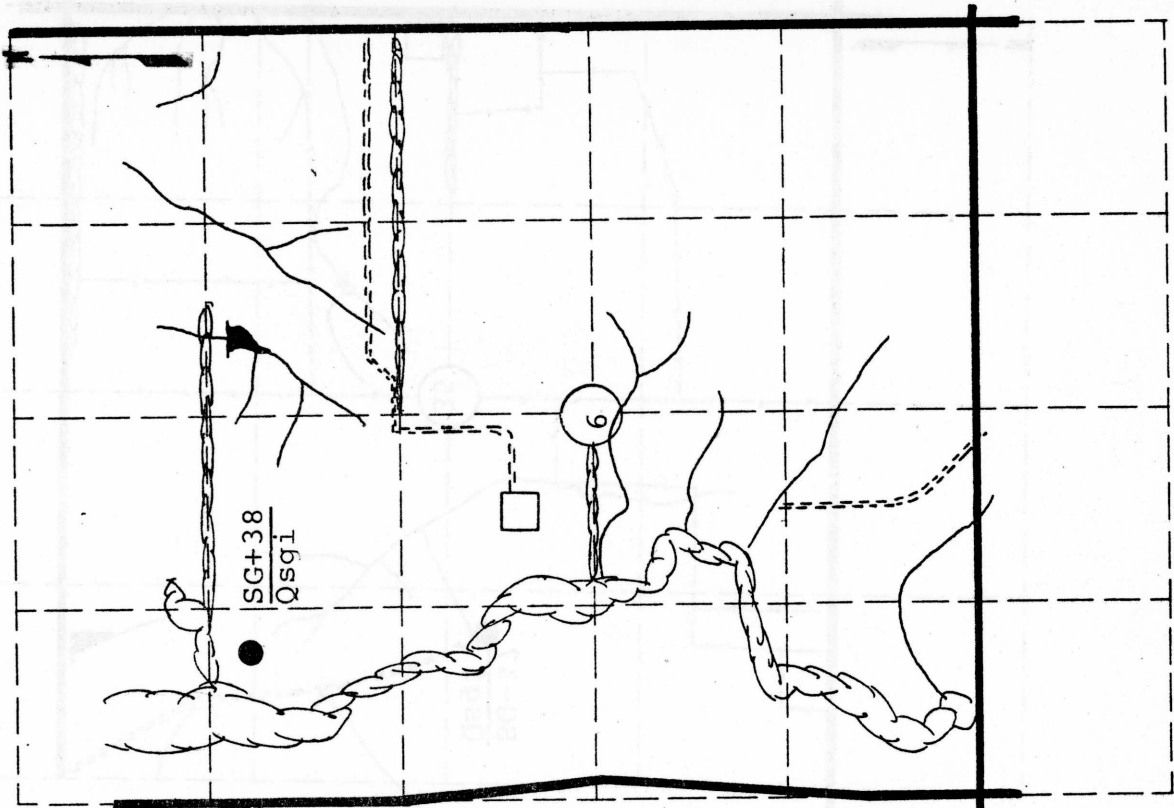
Site No. SG+38 Date September 1965
Qsgi
 Material Sand & Gravel County McPherson
 Location NW 1/4 NW 1/4 Sec. 6 Twp. 19S Range 4W
 Owner Clarence Ensminger Conway, Kansas
 address
 Nature of Deposit Dry Accessibility Fair
 Status of Site Open site; not sampled

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	4	8	16	30					50	100	200

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

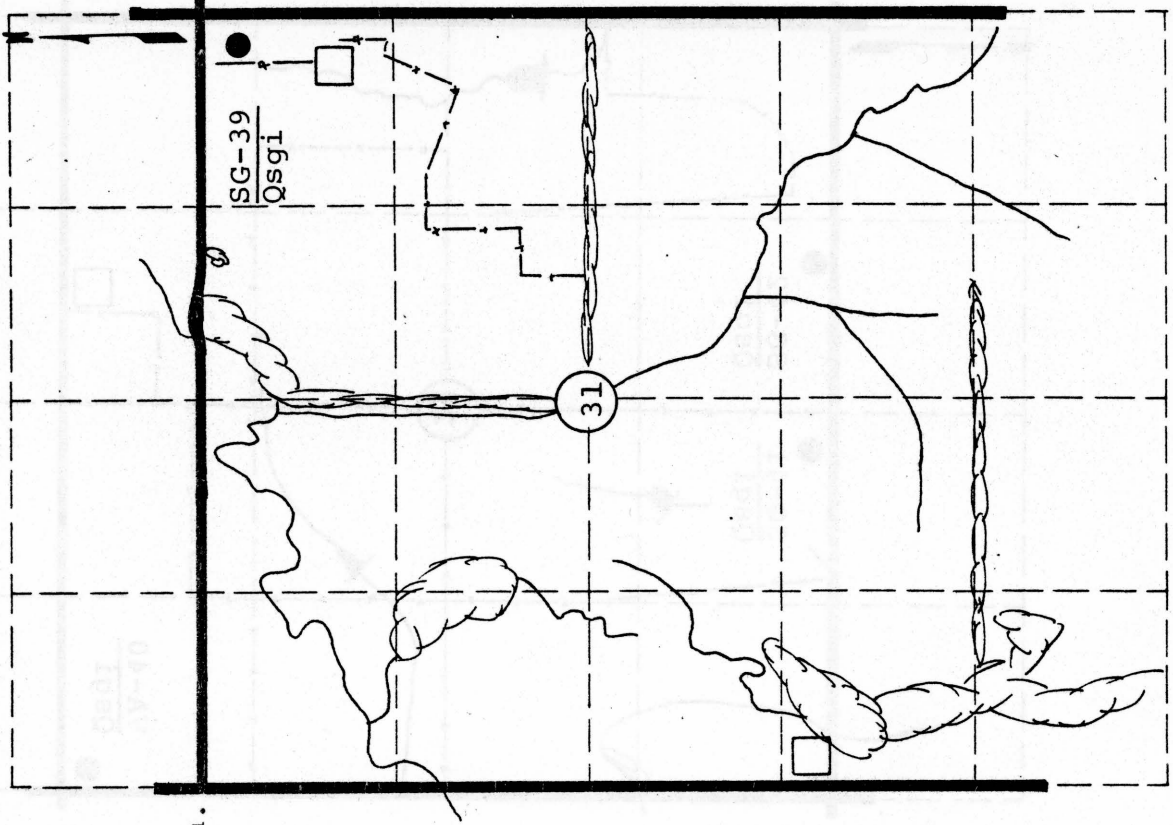
Site No. SG-39 Date September 1965
Qsgl
 Material Sand and Gravel County McPherson
 Location NE 1/4 NE 1/4 Sec. 31 Twp. 18S Range 4W
 Owner Mary Minns et al. 134 Margaret Circle, Enid, Okla.
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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	4	8	16	30					50	100			
2																		

CORRELATION DATA

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



MATERIAL SURVEY REPORT

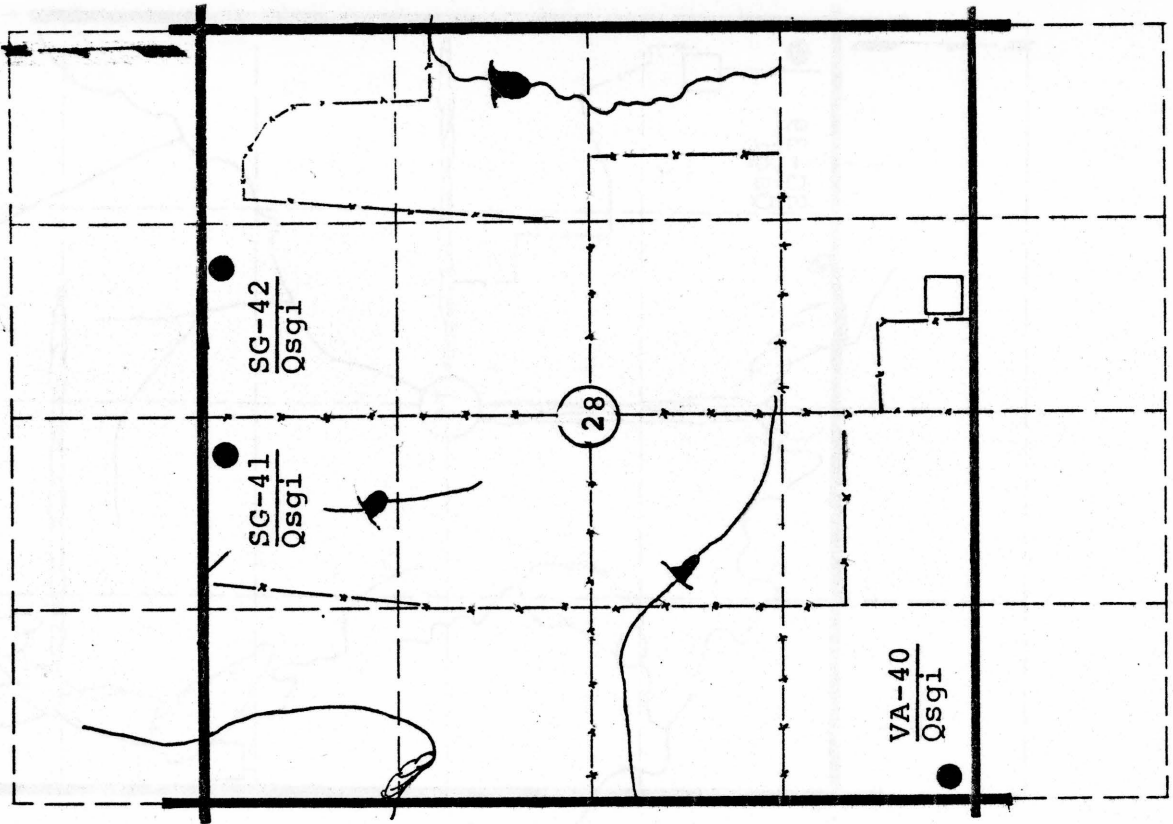
Site No. VA-40 Date September 1965
Qsgl
 Material Volcanic Ash county McPherson
 Location SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 28 Twp. 18S Range 4W
 Owner Virgil L. & Willard H. Sandahl, McPherson, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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				

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island and Sappa Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks Lower portion of this pit contains some sand and gravel.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

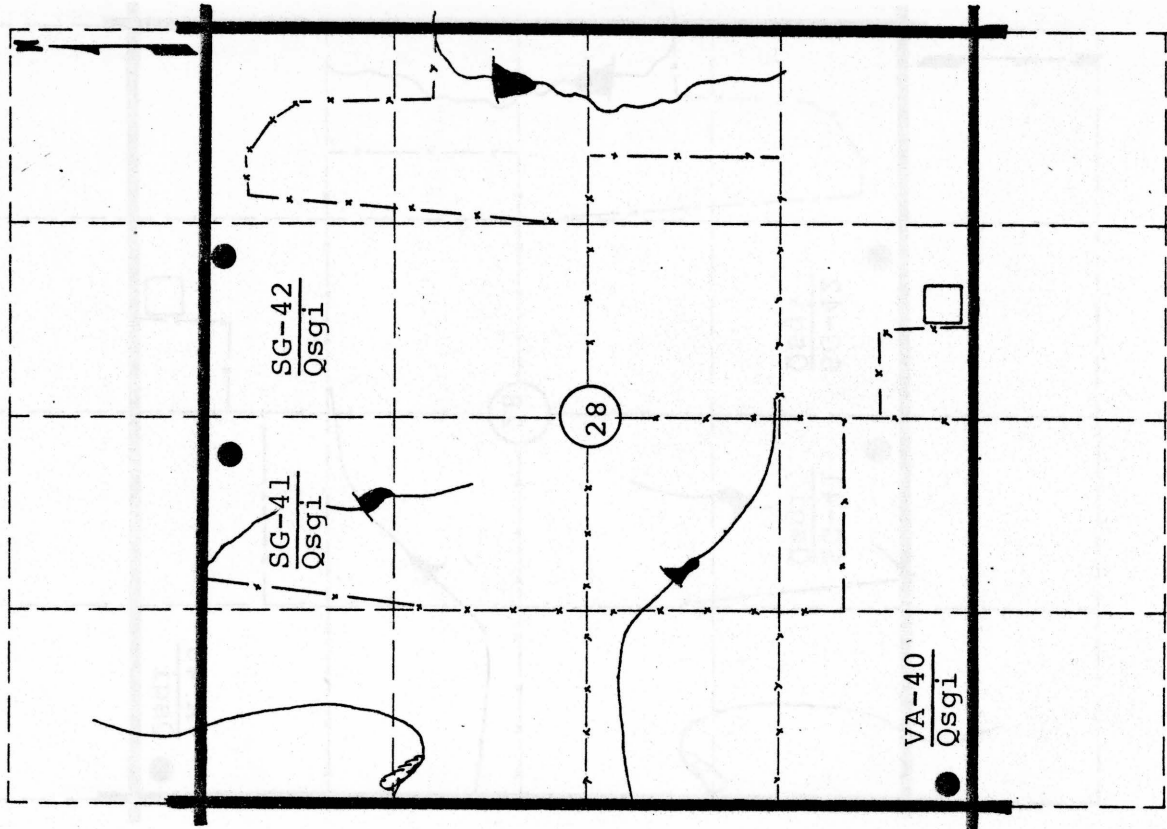
Site No. SG-41 Date September 1965
Qsgl
 Material Sand & Gravel County McPherson
 Location NE 1/4 NW 1/4 Sec. 28 Twp. 18S Range 4W
 Owner Rhynard Forsberj R. R., Marquette, Kansas
name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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 Grand Island 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 SURVEY REPORT

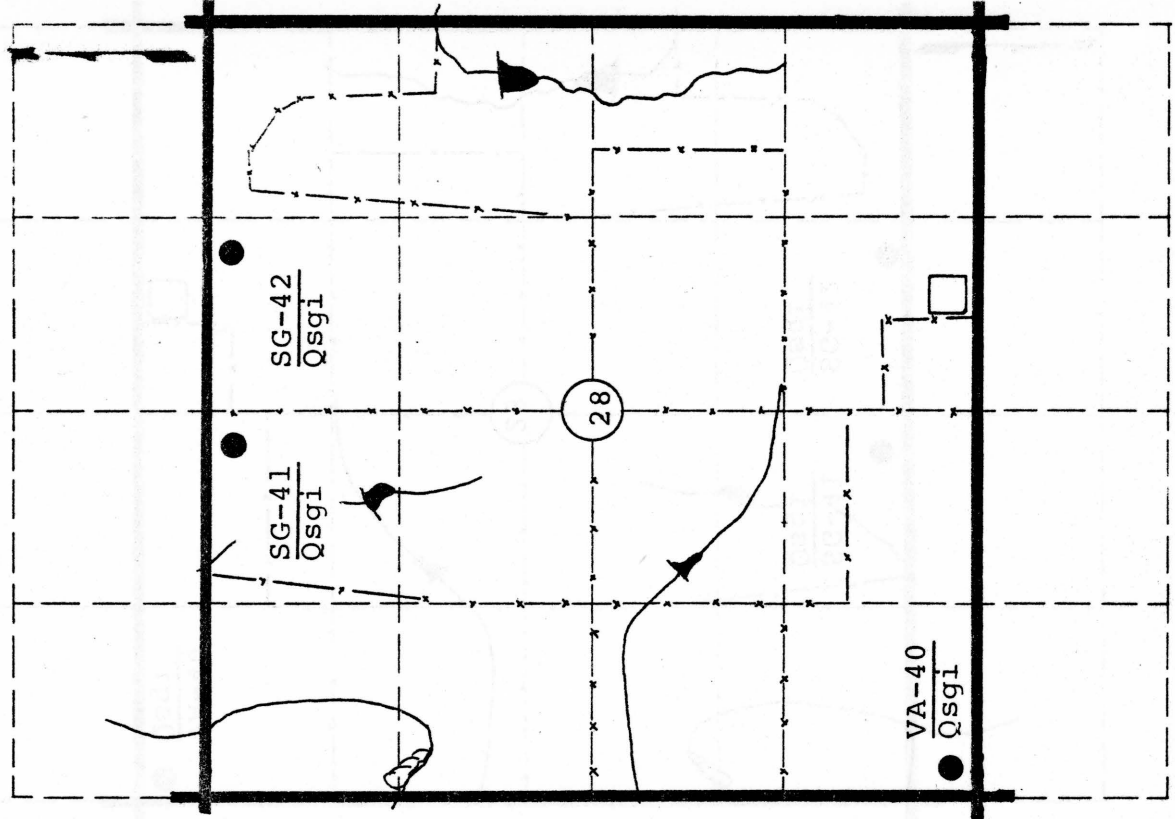
Site No. SG-42 Date September 1965
Qsgl
 Material Sand & Gravel County McPherson
 Location NW 1/4 NE 1/4 Sec. 28 Twp. 18S Range 4W
 Owner Elmer E. Larson R. R. 3, McPherson, Kansas
name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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				

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island 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 SURVEY REPORT

Site No. SG+44 Date September 1965
Qsgl
 Material Sand & Gravel County McPherson
 Location NE 1/4 SE 1/4 Sec. 34 Twp. 19S Range 3W
 Owner See Remarks Below address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

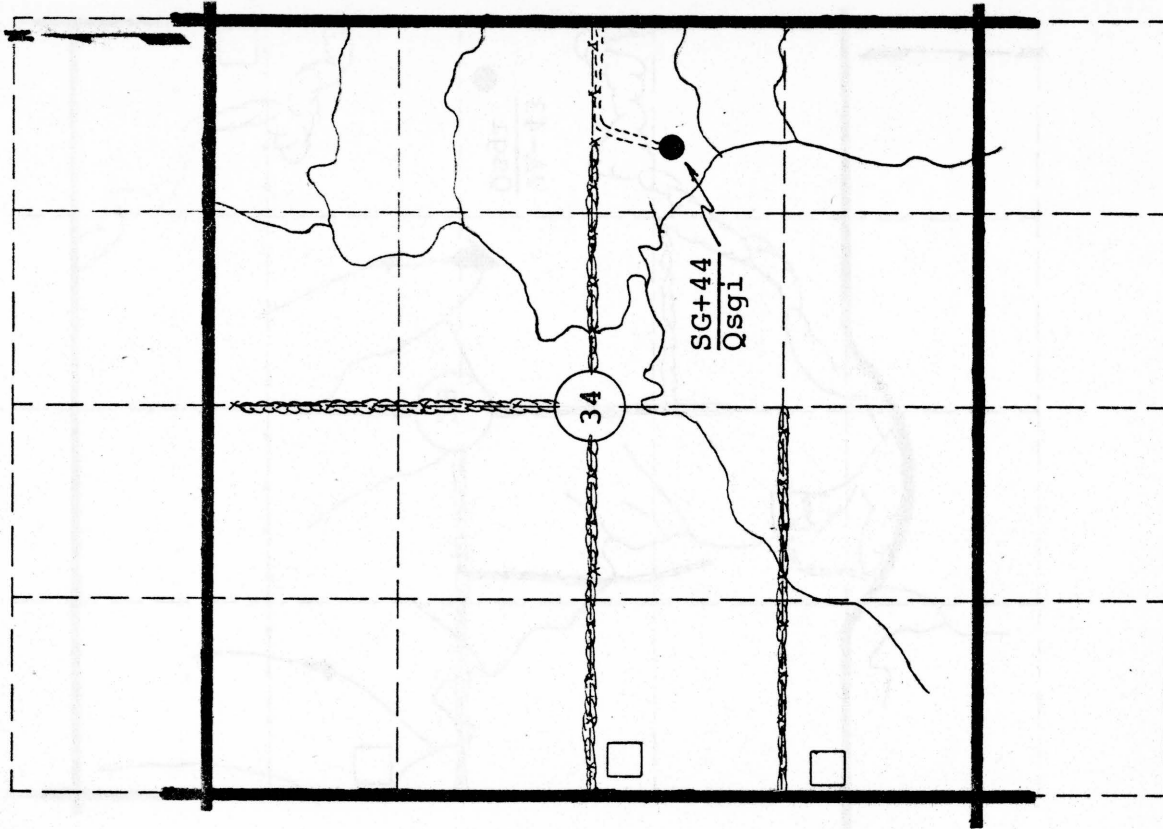
EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of overburden	Depth of Material	Percent Retained							Wash No. 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 Grand Island Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks Maude Elsie West Est, & George R. Lehmborg
McPherson, Kansas

This pit has expansion possibilities.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

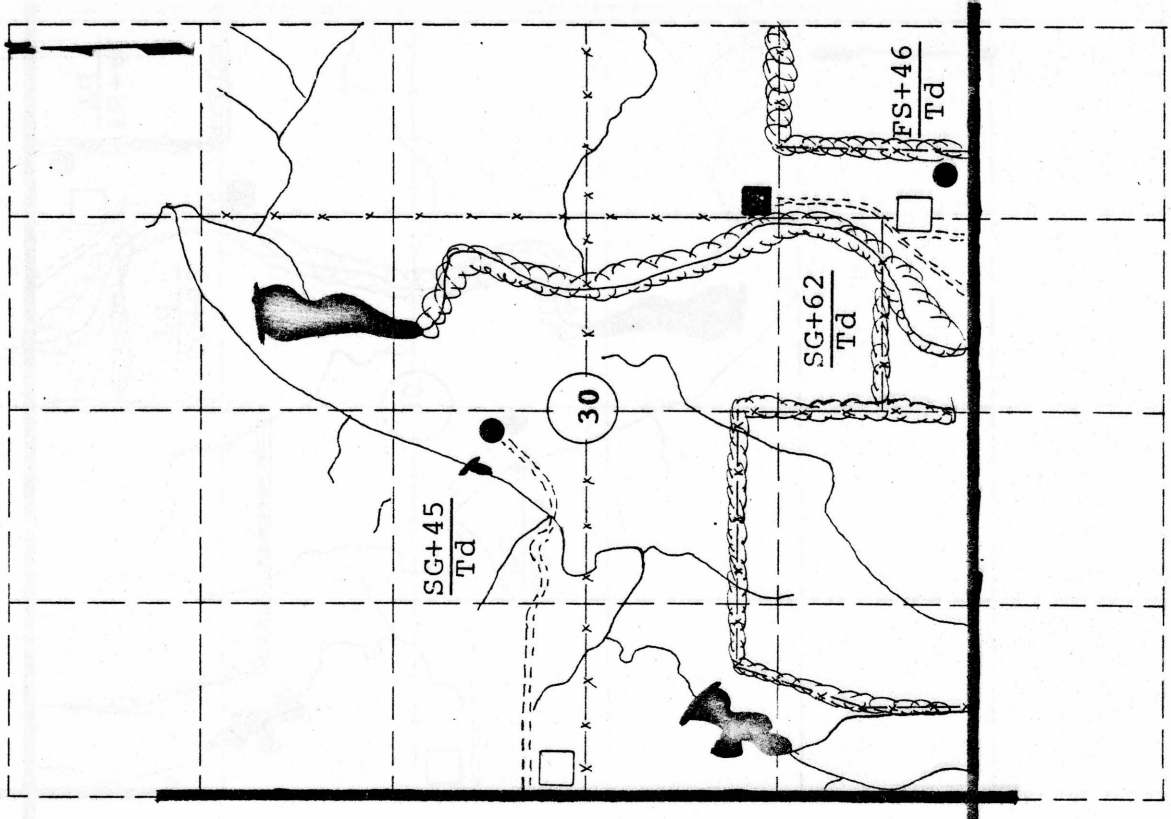
Site No. SG+45 Date September 1965
Td
 Material Sand & Gravel County MCPHERSON
 Location SE 1/4 NW 1/4 Sec. 30 Twp. 18S Range 1W
 Owner E. R. Williams R. R. 1, Galva, Kansas
 address
 Nature of Deposit Dry Accessibility POOR
 Status of Site Open site; not sampled

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 Delmore Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Mt. Cu. Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

FS+46
Td

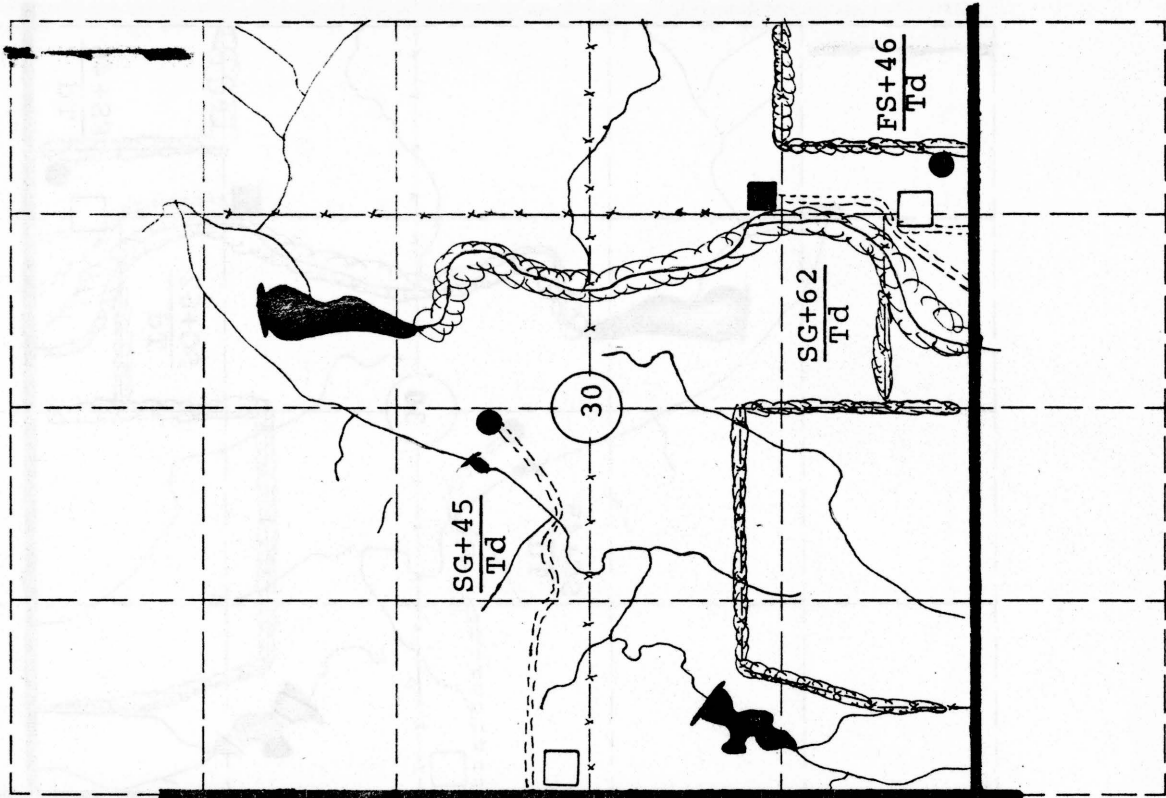
Site No. _____ Date September 1965
 Material Fine Sand County MCPHERSON
 Location SE 1/4 SE 1/4 Sec. 30 Twp. 18S Range 1W
 Owner J. H. Klinkerman Est. Canton, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; not sampled

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 Delmore Formation
 Material Similar to _____
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks Some material from this location may be used as mineral filler.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

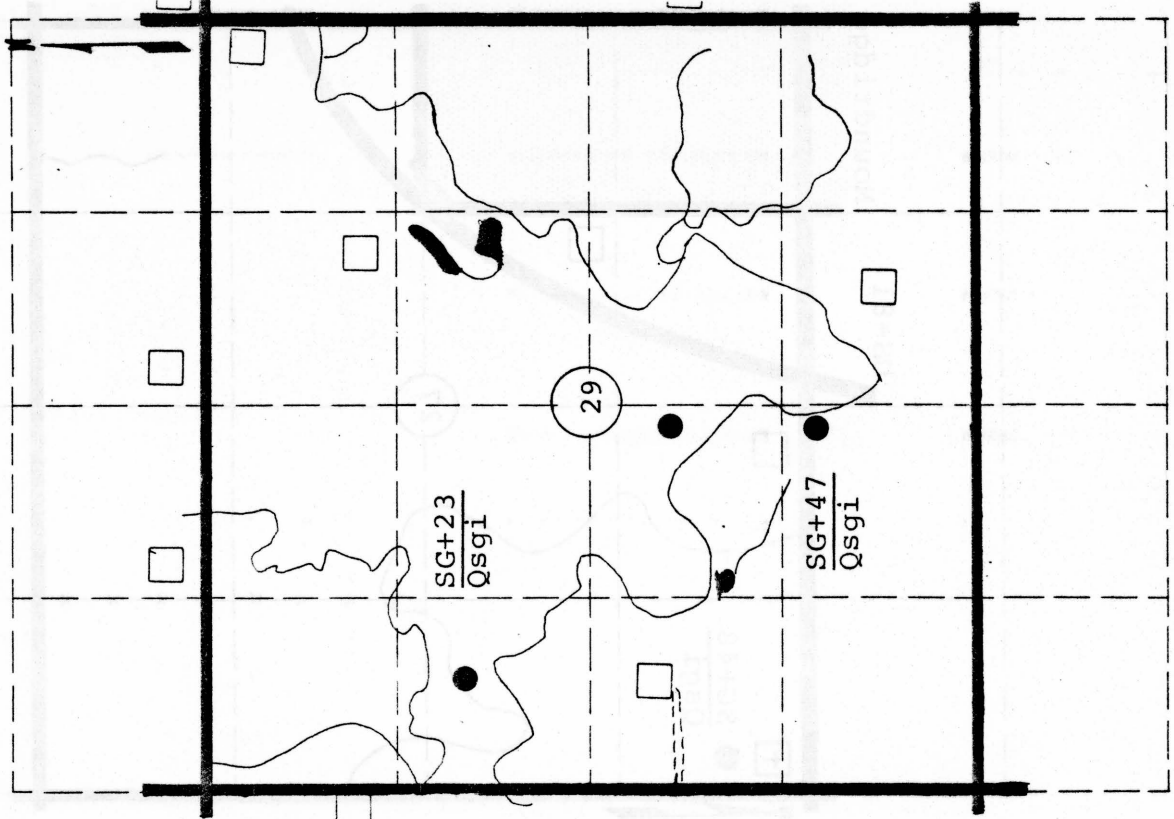
Site No. SG+47 Date September 1965
Qsgi
 Material Sand & Gravel County McPherson
 Location SW $\frac{1}{4}$ Sec. 29 Twp. 21S Range 2W
 Owner E. E. Flickner Moundridge, Kansas address
 Nature of Deposit Dry Accessibility Fair
 Status of Site Open site; not sampled

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. I.			
				1 1/2	3/4	3/8	4	8	16	30					50	100	

CORRELATION DATA

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



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

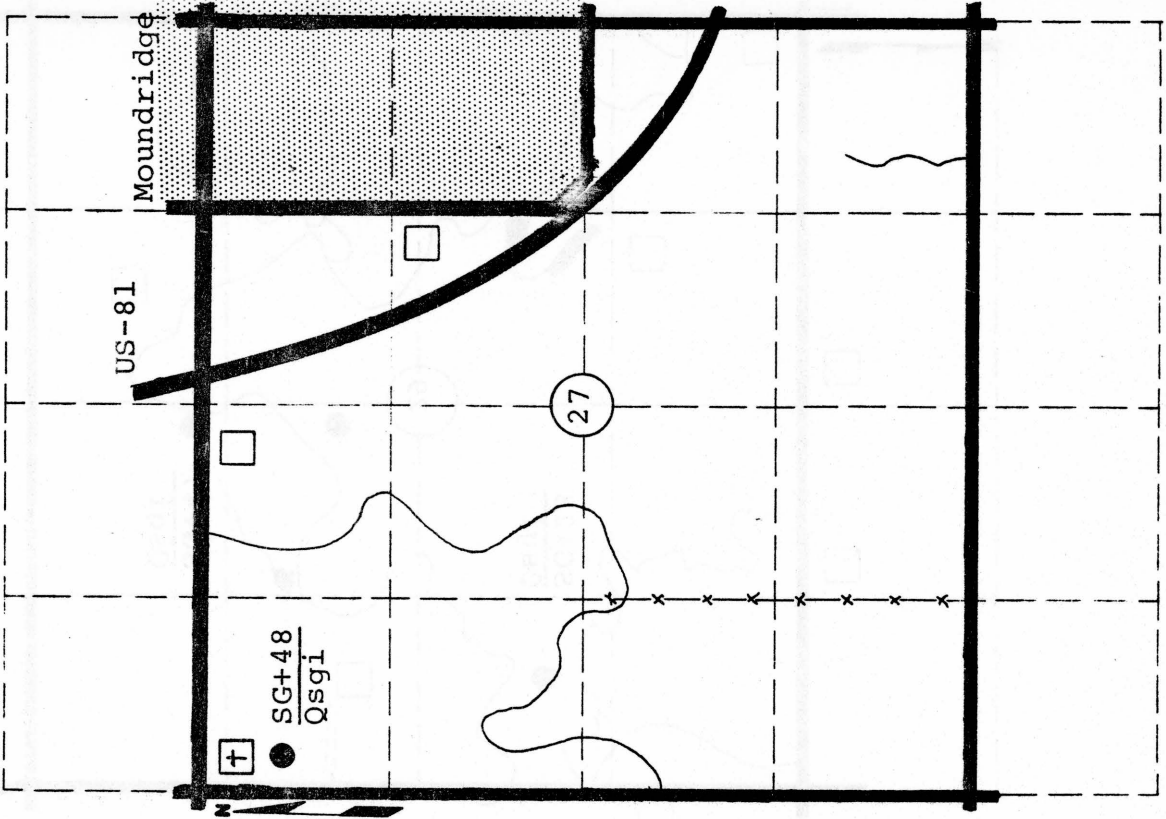
SG+48
Qsg1
 Site No. _____ Date September, 1965
 Material Sand and Gravel County McPherson
 Location NW 1/4 NW 1/4 Sec. 27 Twp. 21S Range 2W
 Owner C. S. Goering Moundridge, Kansas
 Nature of Deposit Wet Accessibility Good
 Status of Site Open site; not sampled

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 Grand Island Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.ft. _____ Str. Ratio _____
 Remarks _____

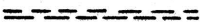















Scale:

APPENDIX II

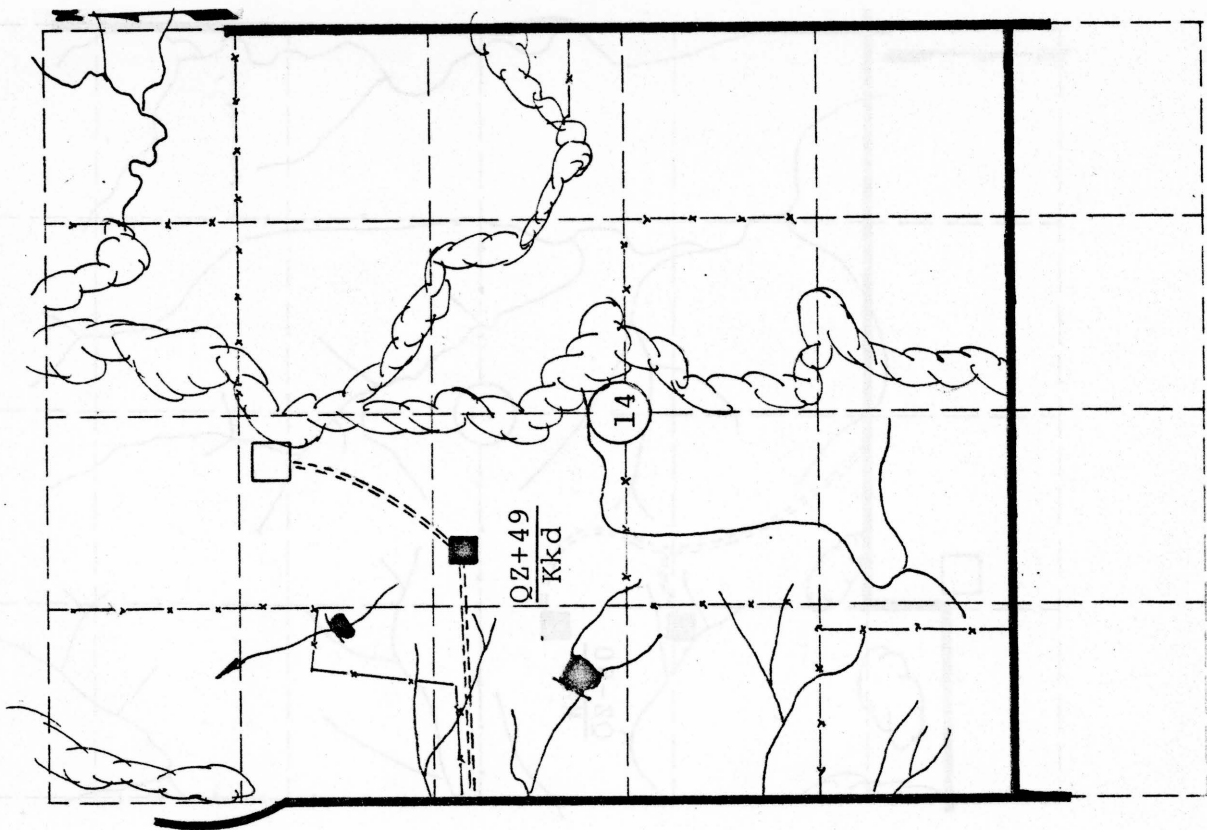
The following site data forms are designated as "open sites; sampled." The sites described herein are depicted on the county materials maps as a "■".

LEGEND

	Trail or lane		Open materials site: sampled
	Road		Center of section
	Railroad		Farm site
	Hedge or trees		Cemetery
	Major streams		School
	Intermittent streams		Church
	Pond or lake		Town or city

MATERIAL SURVEY REPORT

Site No. QZ+49 Date September 1965
Kkd
 Material "Quartzite" County McPherson
 Location NW $\frac{1}{4}$ Sec. 14 Twp. 18S Range 2W
 Owner Aurthur W. Johnson R. R. 1, Galva, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open 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

CORRELATION DATA

Geological Age Cretaceous
 Geological Source Dakota Formation
 Material Similar To Material reported on SHC Form 619
No. 59-1, Lab No. 43819
 Specific Gravity (Sat.) 2.67 (Dry)
 Los Angeles Wear 26.3 Grade A
 Absorption _____ Soundness 0.97
 Wt. Cu.Ft. _____ Str. Ratio _____

MATERIAL SURVEY REPORT

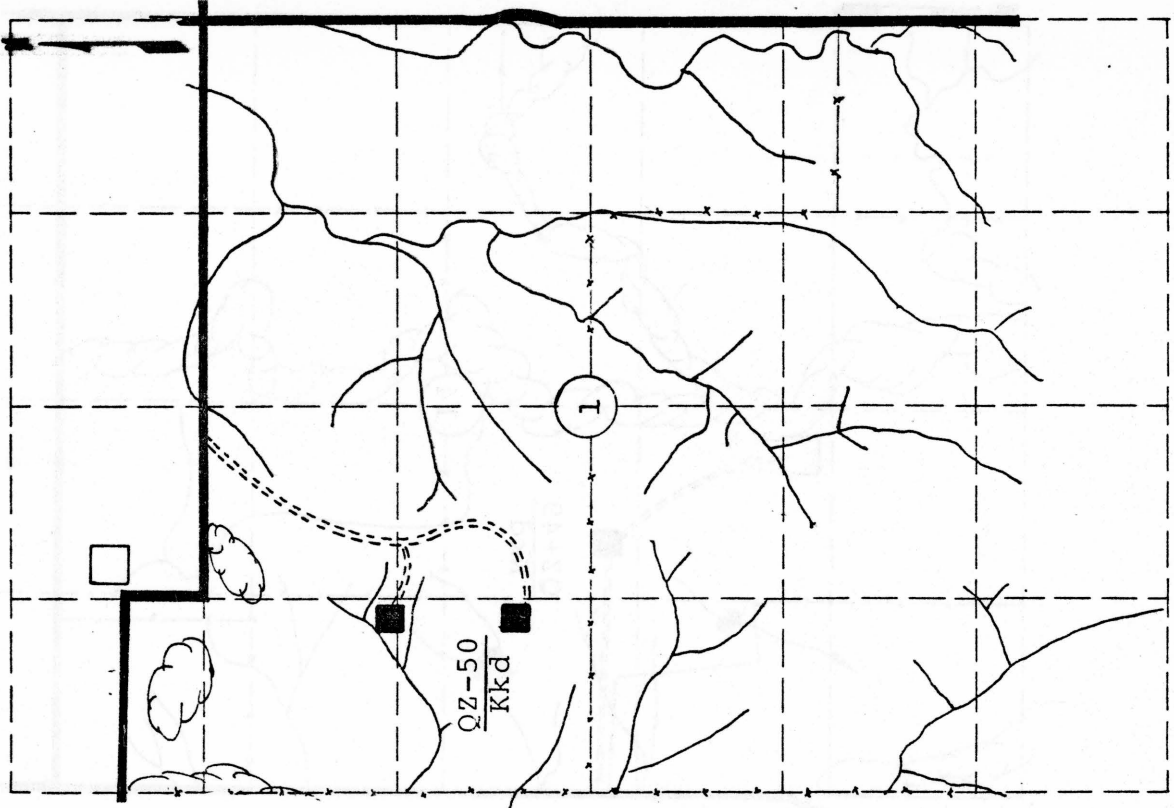
Site No. QZ-50 Date September 1965
Kkd
 Material "Quartzite" County McPherson
 Location NW 1/4 Sec. 1 Twp. 18S Range 2W
 Owner Mannie M. Miller 1022 S. Main, McPherson, Kans.
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

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	100	

CORRELATION DATA

Geological Age Cretaceous
 Geological Source Dakota Formation
 Material Similar To Material reported on SHC Form 645,
 Lab No. 31402
 Specific Gravity (sat.) 2.47 (dry) 2.37
 Los Angeles Wear 41.3 Grade B
 Absorption 4.27 Soundness 0.99
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

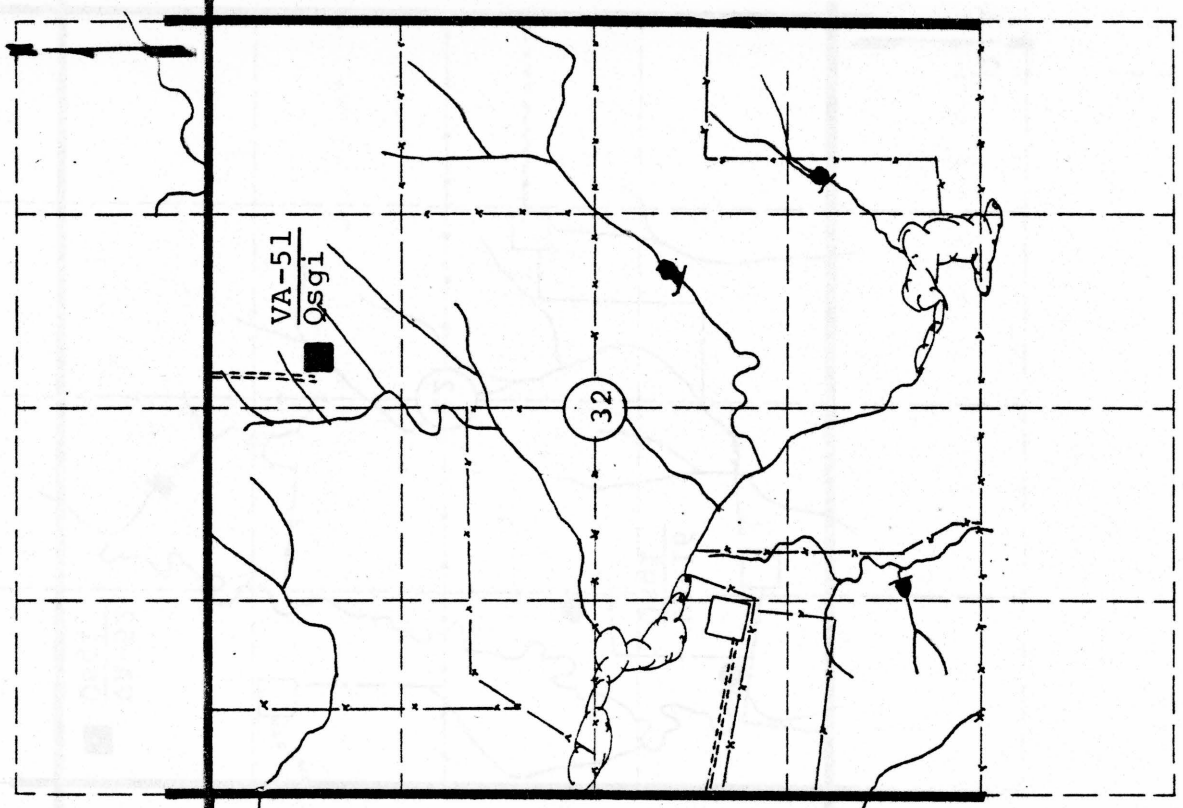
Site No. VA-51 Date September 1965
Qsg1
 Material Volcanic Ash County MCPHERSON
 Location NE 1/4 Sec. 32 Twp. 17S Range 2W
 Owner Clarence Patrick 839 E. Jewell, Salina, Kansas
name address
 Nature of Deposit DRY Accessibility Good
 Status of Site Open site; sampled

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
				0	0	0	0	0	0	0	0	82		0	0
				0	0	0	0	0	0	0	0	73		0	0

CORRELATION DATA

Geological Age Quaternary
 Geological Source Sappa Formation
 Material Similar To Material reported on SHC Form 619
 No. 59-5
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

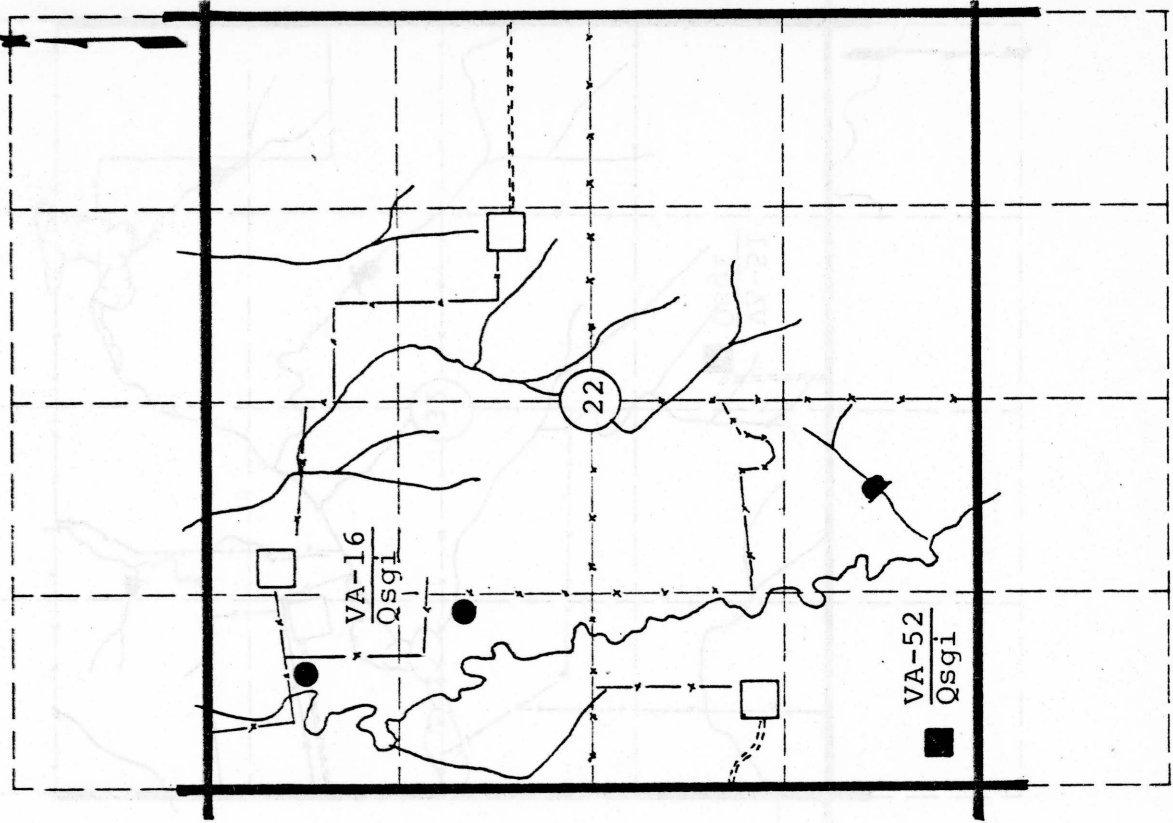
Site No. VA-52 Date September 1965
Qsgl
 Material Volcanic Ash County MCPherston
 Location SW $\frac{1}{4}$ Sec. 22 Twp. 18S Range 4W
 Owner Ephriam F. Peterson 1308 S. Chestnut, McPherson,
address Kansas
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

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				
AVE			0	0	0	0	0	1	1	1	6		23	3

CORRELATION DATA

Geological Age Quaternary
 Geological Source Sappa Formation
 Material Similar To Material reported on SHC Form 619
No. 59-12
 Specific Gravity (Sat.) _____ (Dry)
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Cu. Ft. _____ Str. Ratio _____
 Remarks Some contamination with clayey silt.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

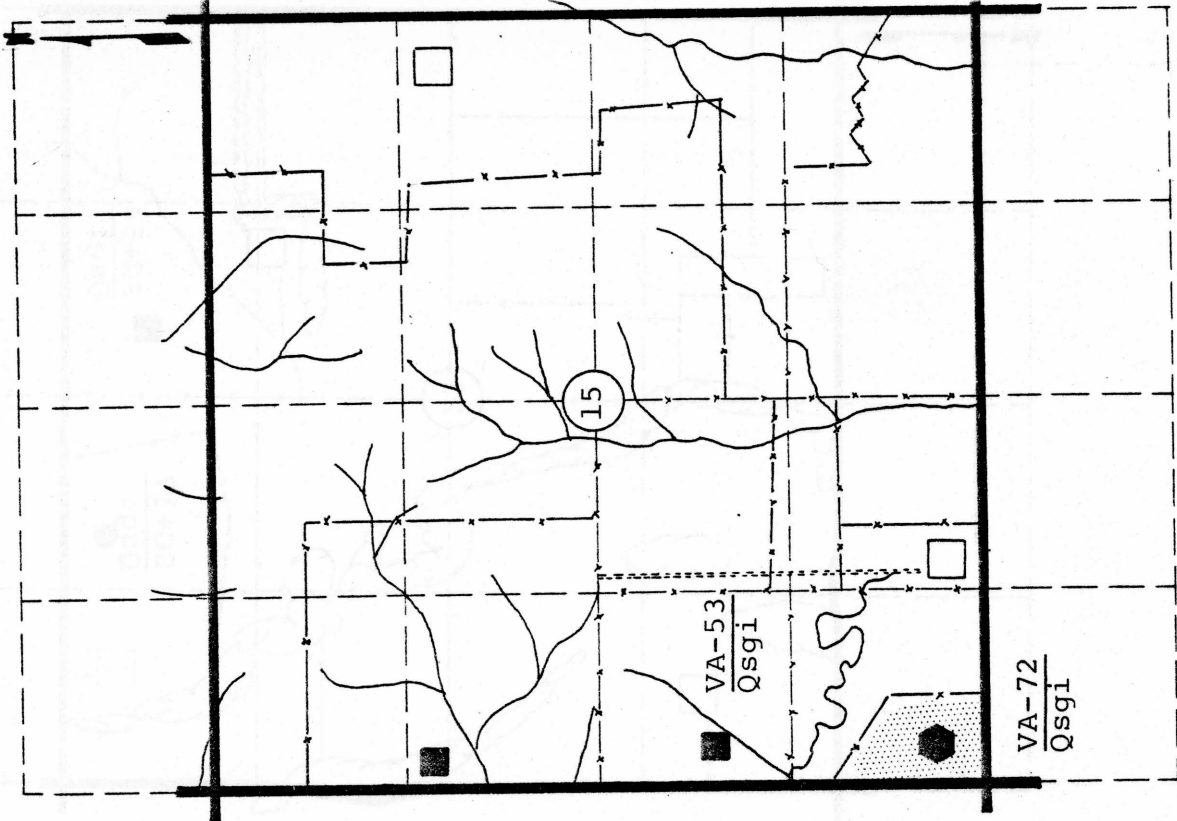
Site No. VA-53 Date September 1965
Qsgl
 Material Volcanic Ash County McPherson
 Location W $\frac{1}{2}$ Sec. 15 Twp. 18S Range 4W
G. Elmer Larson et al. R. R. 3, McPherson, Kansas
 Owner _____
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of Material 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
AVE				0	0	0	0	0	0	0	1	2		34	1

CORRELATION DATA

Geological Age Quaternary
 Geological Source Sappa Formation
 Material Similar To Material reported on SHC Form 619
No. 59-11
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks Some contamination with clayey silt.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

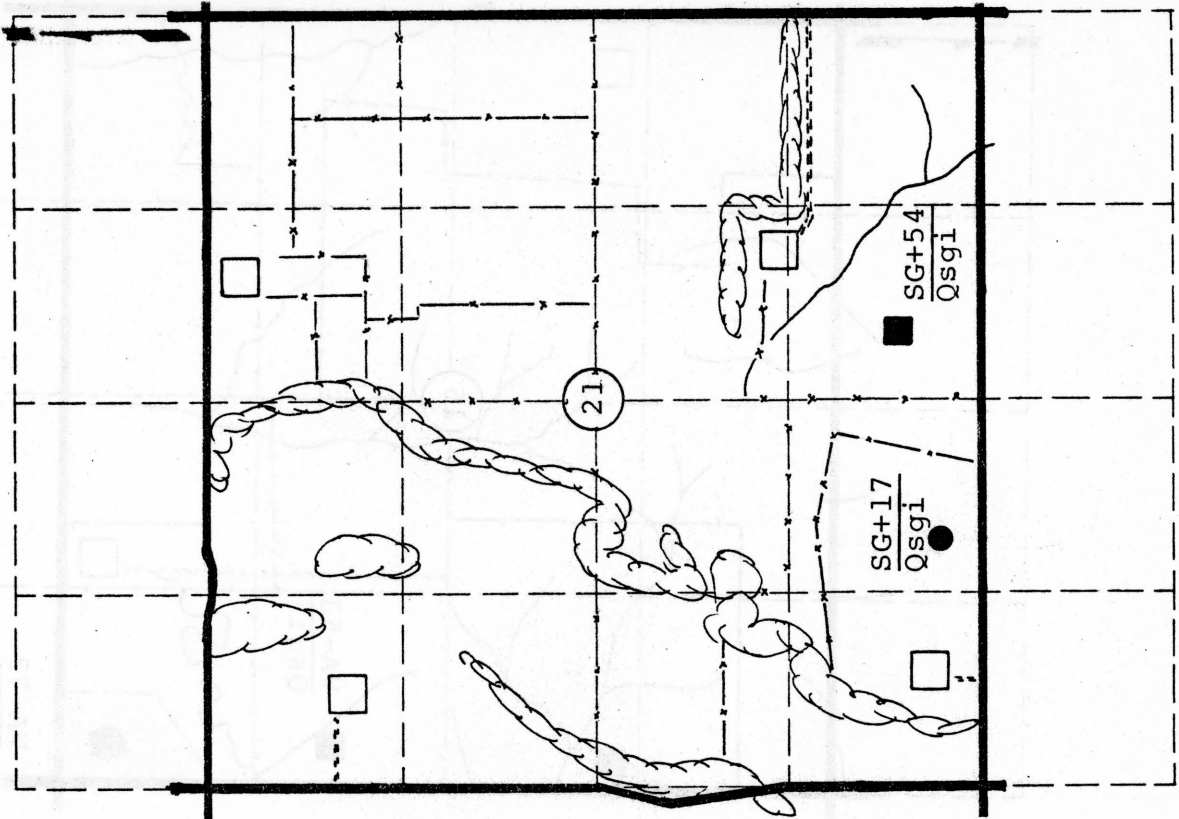
Site No. SG+54 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location SW 1/4 SE 1/4 Sec. 21 Twp. 18S Range 4W
 Owner Ernest E. Swanson R. R. 3, McPherson, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

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
AVE			0	0	0	1	6	19	44	84	94	6	2.50			

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island Formation
 Material Similar To Material reported on SHC Form 619
No. 59-8, Lab No. 85990
 Specific Gravity (Sat.) 2.60 (Dry)
 Los Angeles Near 30.2 Grade D
 Absorption _____ Soundness 0.93
 Wt. Cu.ft. 107.6 Str. Ratio 1 day 1.43, 3 day 1.38
 Remarks _____



Scale: 1" = 1/4 Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

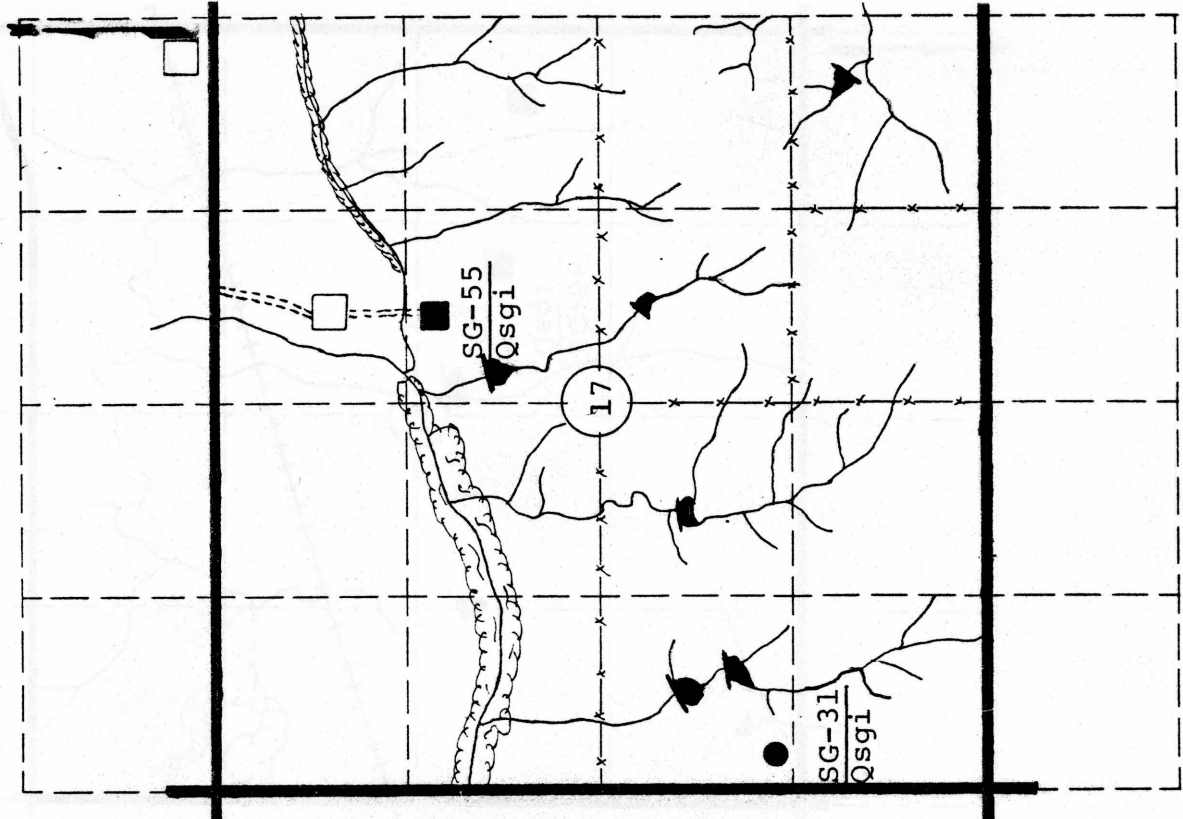
Site No. SG-55 Date September 1965
Qsgl
 Material Sand & Gravel County McPherson
 Location NE 1/4 Sec. 17 Twp. 17S Range 5W
 Owner Wilbur D. Fry Marquette, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

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
			0	2	4	8	17	43	75	91	963.7	3.51			

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island Formation
 Material Similar to Material reported on SHC Form No. 633,
 Lab No. 10465
 Specific Gravity (sat.) 2.60 (dry)
 Los Angeles Wear 35.3 Grade D
 Absorption 0.40 Soundness
 Mt. Cu.ft. 109.95 Str. Ratio 1 day 1.01, 3 day 1.00
 Remarks _____



MATERIAL SURVEY REPORT

Site No. SG+56 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location NE 1/4 Sec. 19 Twp. 17S Range 5W
 Owner J. Edwin Anderson 4328 Holly, Kansas City, Mo.
name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

EXPLORATION DATA

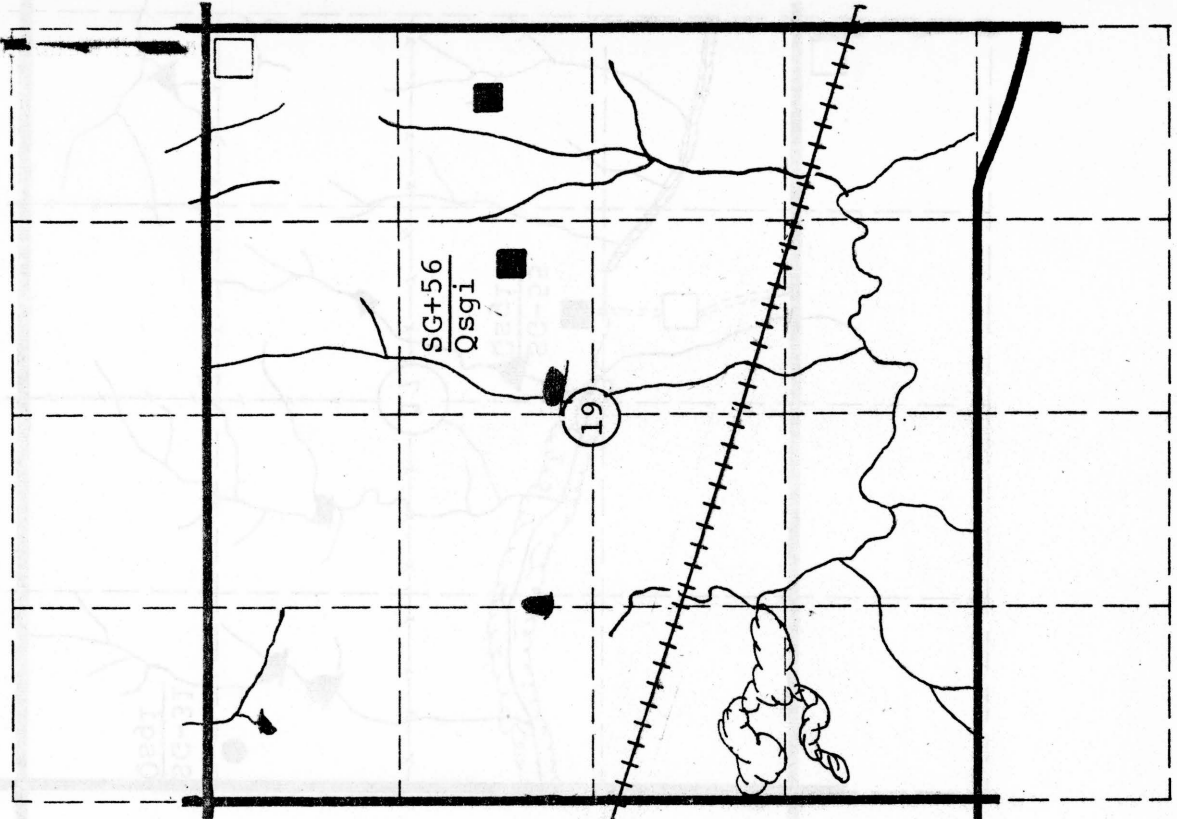
Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained								Wash 200	G.F.	L.L.	P.I.	
				1/2	3/4	3/8	4	8	16	30	50					100
			0	1	3	6	20	53	85	96	98	1.88				

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island Formation
 Material Similar To Material reported on Lab Sheet No. 11093

Specific Gravity (Sat.) 2.61 (Dry)
 Los Angeles Wear 32.6 Grade C
 Absorption 0.6 Soundness 0.96
 Wt. Cu.Ft. 108.6 Str. Ratio 1 day 1.28, 3 day 1.43

Remarks _____



Scale: 1" = 1/4 Mile

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

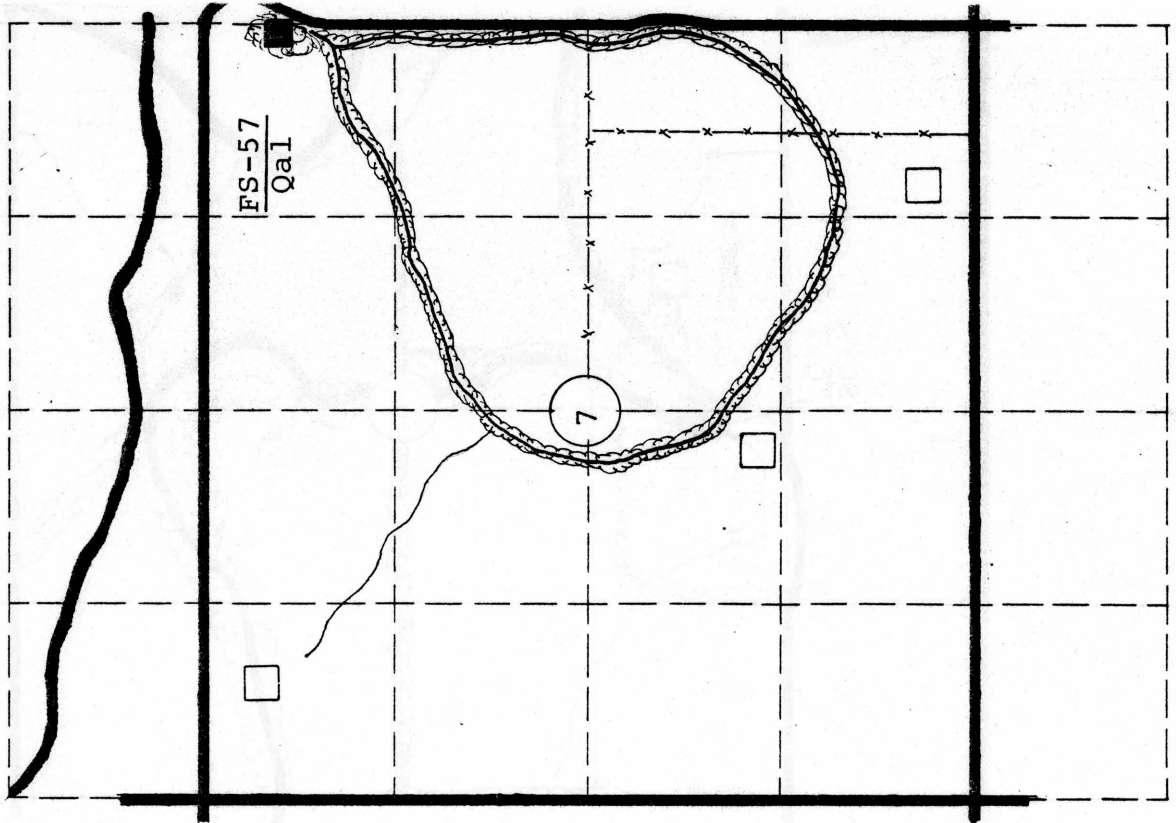
Site No. FS-57 Date September 1965
Qa1
 Material Fine Sand County McPherson
 Location NE 1/4 NE 1/4 Sec. 7 Twp. 17S Range 5W
 Owner Arthur Berquist Marquette, Kansas
name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

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					100
Hole No. 1				0	0	0	0	0	0	1	22	69	22	0.92		

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To Material reported on SHC Form 619
No. 59-3.
 Specific Gravity (Set.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

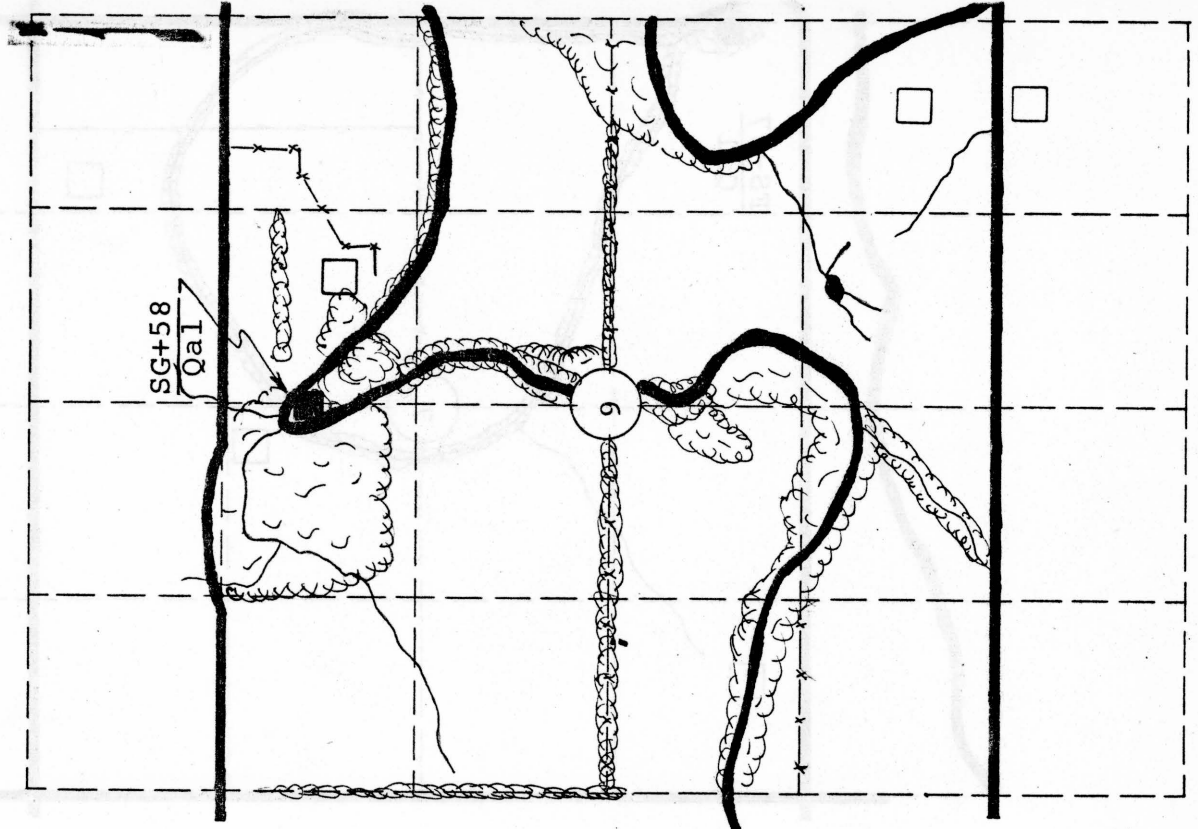
Site No. SG+58 Date September 1965
Qal
 Material Sand & Gravel County McPherson
 Location NW 1/4 NE 1/4 Sec. 9 Twp. 17S Range 5W
 Owner Lincoln-Buryanek 601 E. Kansas, McPherson, Kansas
 Name of Site Open site; sampled
 Nature of Deposit Wet Accessibility POOR
 Status of Site Open site; sampled

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	100
			0	0	3	10	31	69	90	97	98	1.81	3.9			

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To Material reported on SHC Form 619
 No. 59-9 Lab No. 82621
 Specific Gravity (Sat.) 2.60 (Dry)
 Los Angeles Wear 31.8 Grade D
 Absorption 0.95 Soundness 0.95
 Mt. Cu.Ft. 108.3 Str. Ratio 1 day 1.49, 3 day 1.45
 Remarks



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

Site No. LA+59 Date September 1965
Kkd
 Material Lightweight Aggregate County McPherson
 Location NE 1/4 SE 1/4 Sec. 1 Twp. 17S Range 5W
 Owner Buildex Inc. Box 299, Pittsburg, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

EXPLORATION DATA

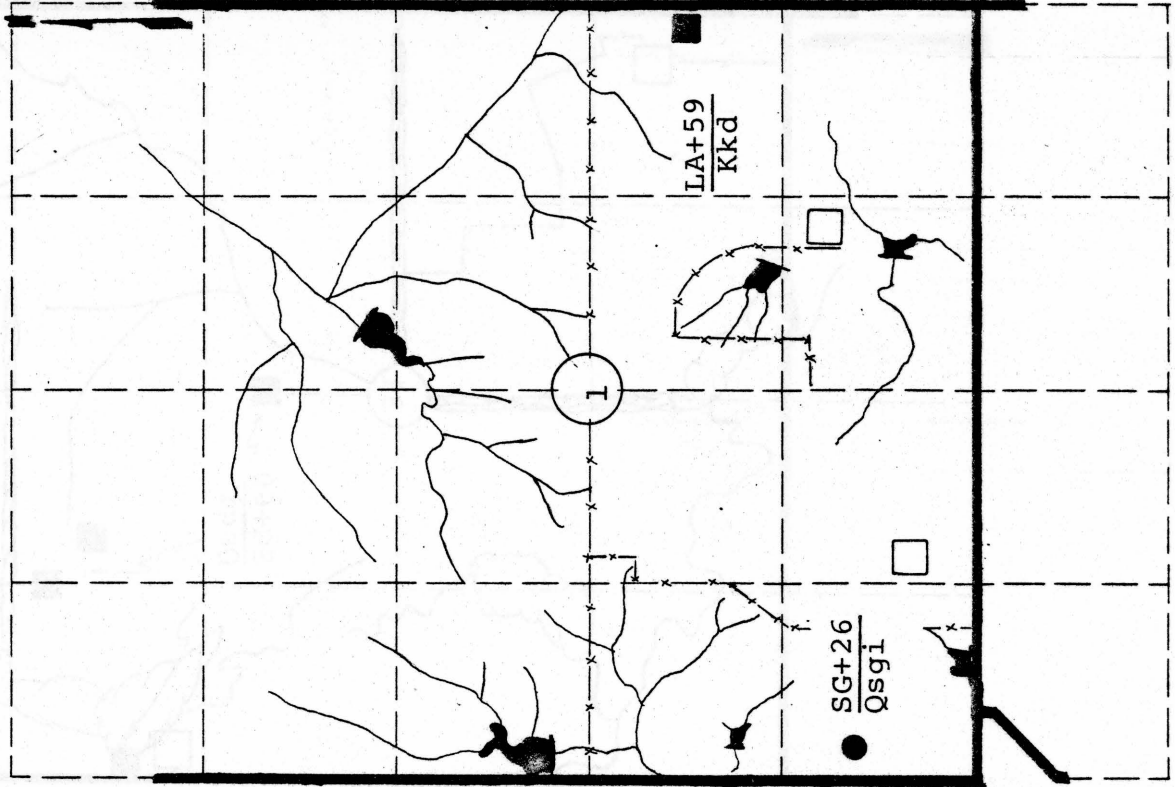
Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained						Wash 200	G.F.	L.L.	P.I.	
				1/2	3/4	3/8	4	8	16					30
				0	0	2893	9798	98	9899	0.4				
				0	0	17	4067	8391	95389	3.93				

CORRELATION DATA

Geological Age Cretaceous
 Geological Source Kiowa Shale Formation
 Material Similar To SHC Lab No. 26270, 22042

Specific Gravity (Sat.) 1.59, 1.45 (Dry)
 Los Angeles Wear 20.3 Grade D
 Absorption 10.9, 10.2 Soundness 0.99, 0.99
 Wt. Cu.Ft. 49.74, 48.35 Str. Ratio

Remarks Material produced by rapid heating of the raw Kiowa Shale to a high temperature in a rotary kiln.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

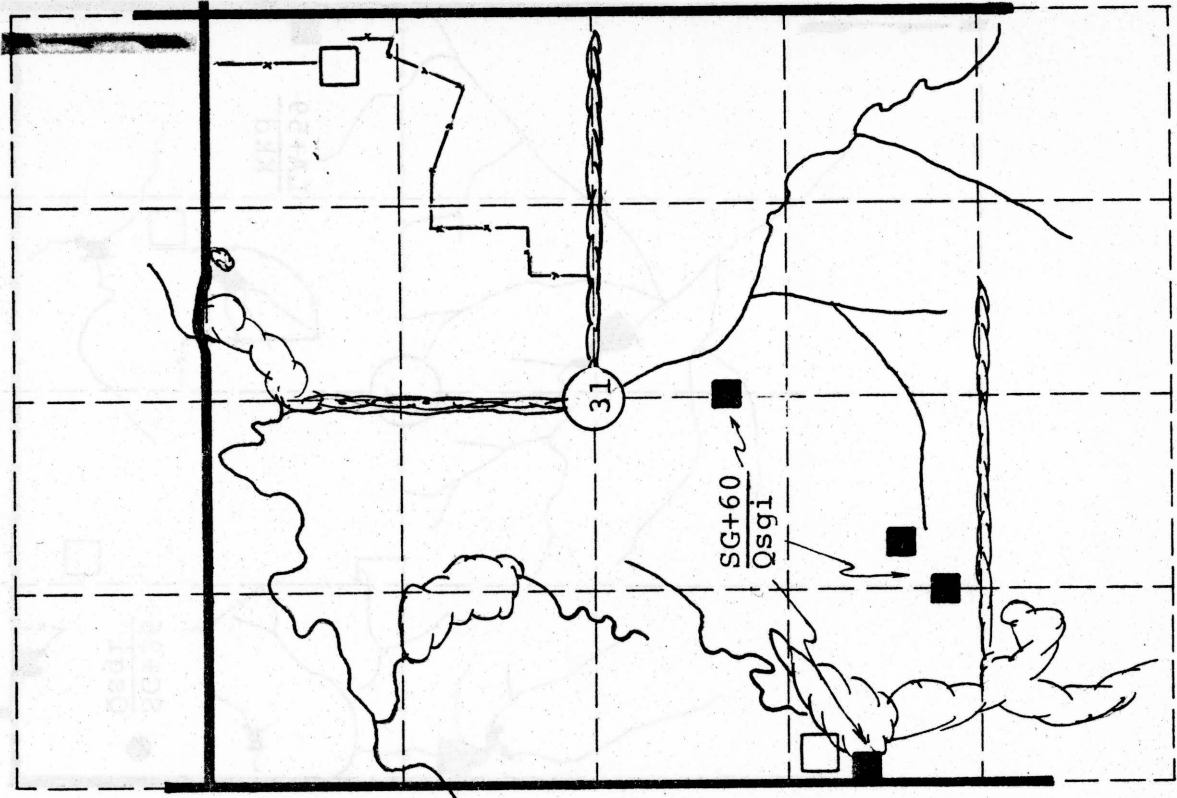
Site No. SG+60 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location S 1/2 Sec. 31 Twp. 18S Range 4W
 Owner See Remarks Below address
 Nature of Deposit Dry Accessibility Fair
 Status of Site Open site; sampled

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					100
AVE of 3				0	0	0	1	5	16	43	76	85	13	2.27		

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island Formation
 Material Similar To Material reported on SHC Form 619
 No. 59-7
 Specific Gravity (Sat.) (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks Laura Hammann et al., % John Kubin, 505 E. Kansas
McPherson, Kansas



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

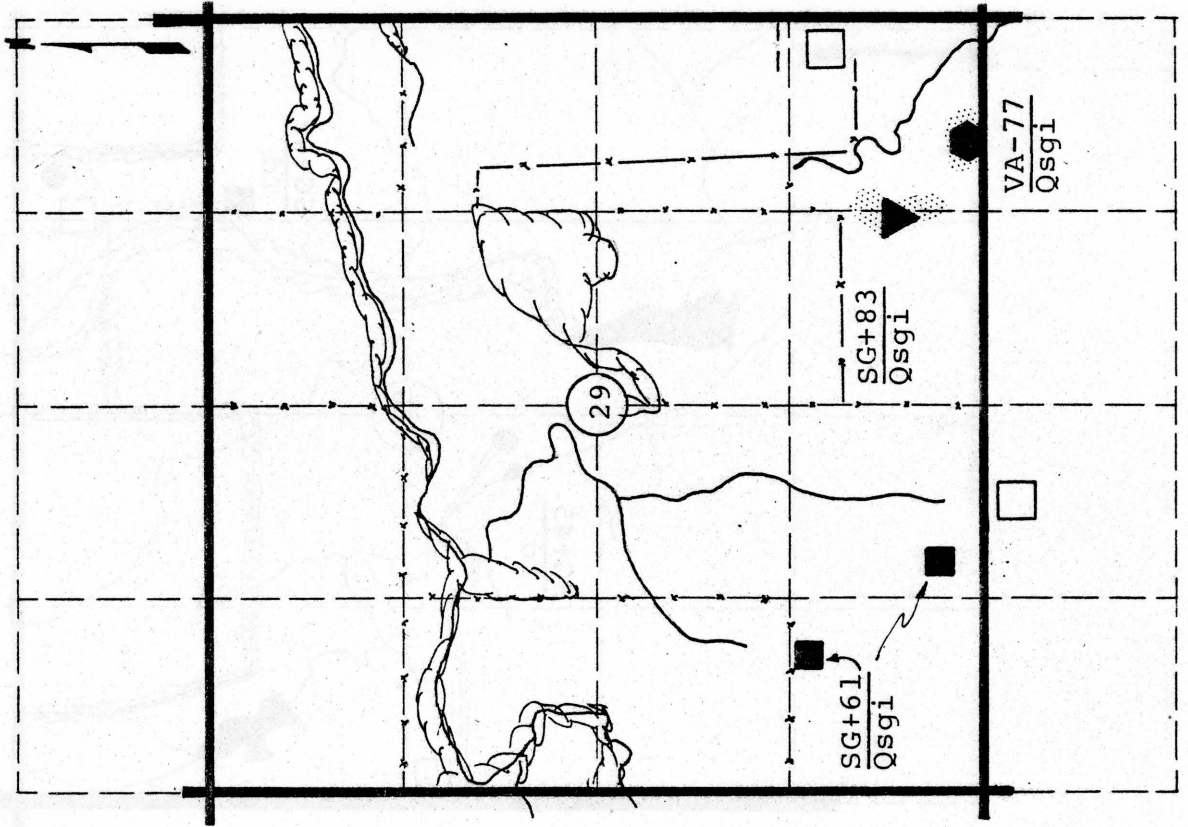
Site No. SG+61 Date September 1965
Qsgi
 Material Sand & Gravel County McPherson
 Location SW 1/4 Sec. 29 Twp. 18S Range 4W
 Owner Pearl A. Sandal R. R. 3, McPherson, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

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	100
AVE				0	0	1	1	8	23	63	87	94	8.5	2.79	18	5

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island Formation
 Material Similar To Material reported on SHC Form 619
 NO. 59-10.
 Specific Gravity (Sat.) 2.59 (Dry)
 Los Angeles Wear 37.8 Grade D
 Absorption 1.0 Soundness 0.96
 Wt. Cu.ft. 103.8 Str. Ratio 1 day 1.16, 3 day 1.29
 Remarks This site has expansion possibilities.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

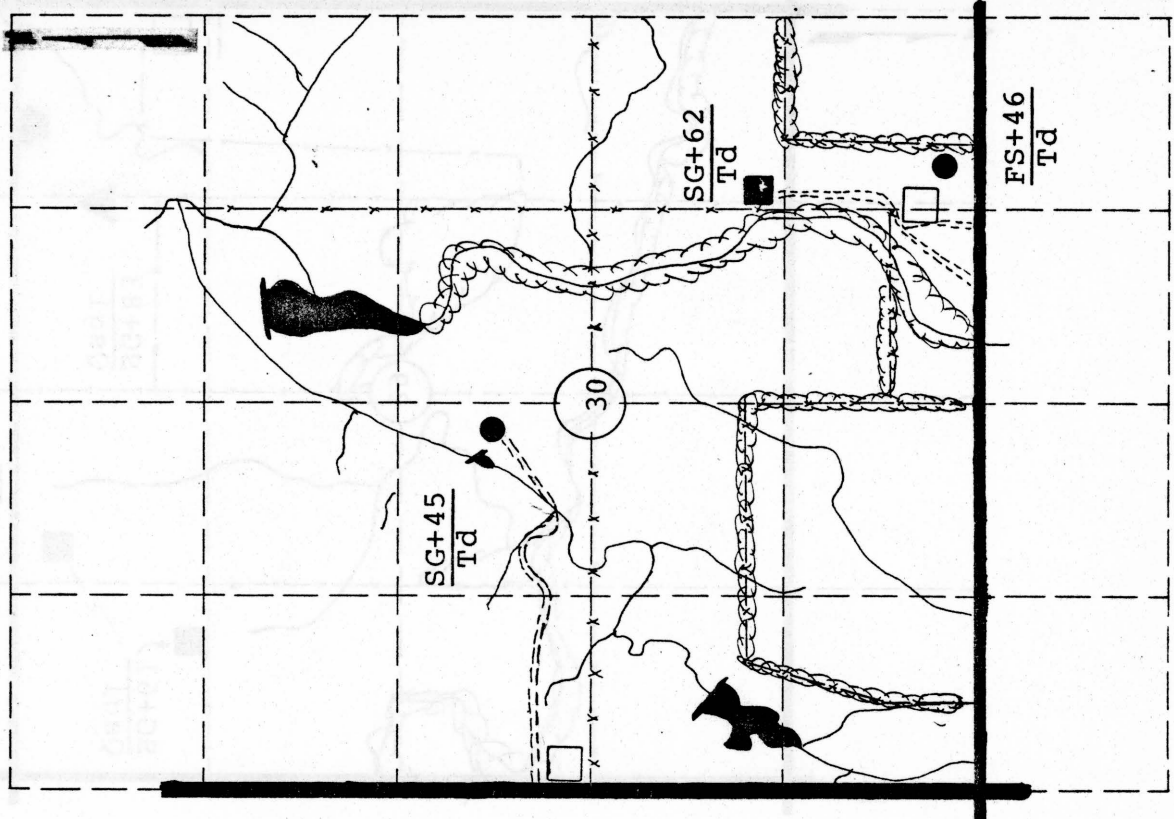
Site No. SG+62 Date September 1965
Td
 Material Sand & Gravel County McPherson
 Location NE 1/4 SE 1/4 Sec. 30 Twp. 18S Range 1W
 Owner J. H. Klingerman Est. Canton, Kansas
 address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

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	100
AVE				0	0	0	1	1	4	19	61	83			3	

CORRELATION DATA

Geological Age Quaternary
 Geological Source Delmore Formation
 Material Similar To Material reported on SHC Form 619
NO. 59-10A.
 Specific Gravity (Sat.) (Dry)
 Los Angeles Near _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

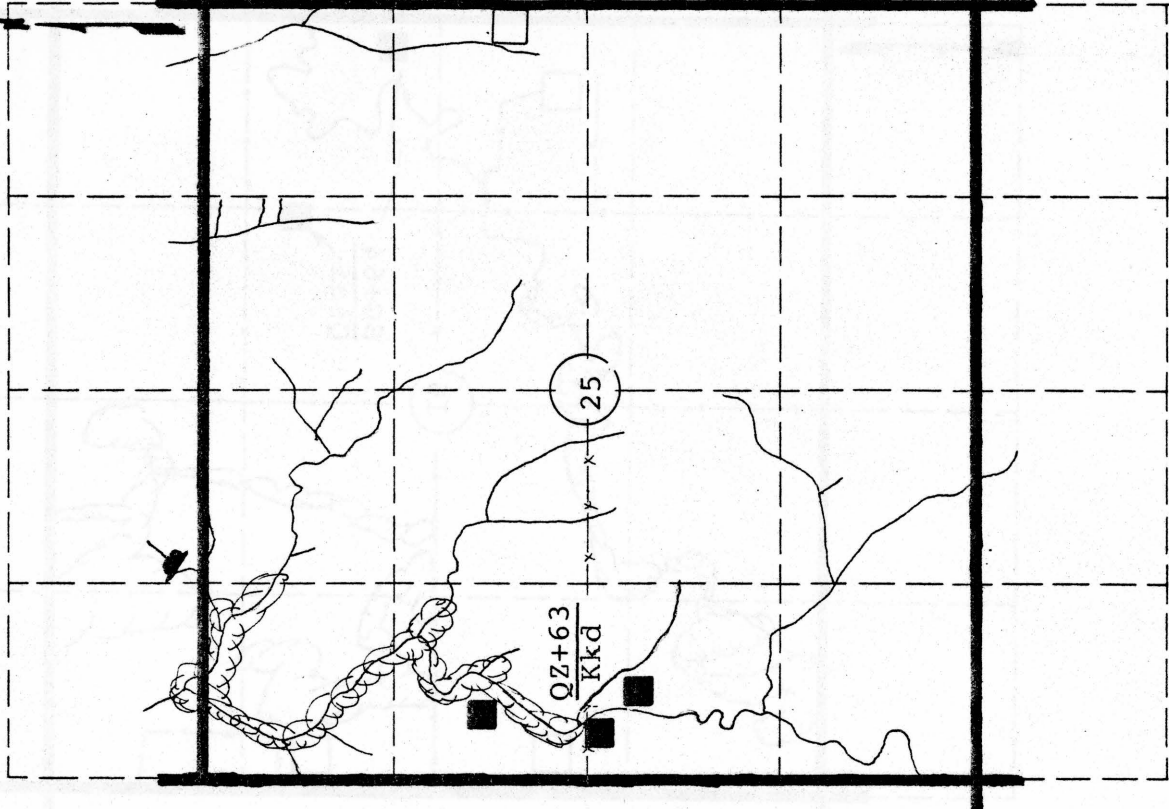
Site No. QZ+63 Date September 1965
Kkd
 Material "Quartzite" County McPherson
 Location W $\frac{1}{2}$ Sec. 25 Twp. 18S Range 2W
 Owner See Remarks Below
 Nature of Deposit Dry Accessibility Fair address
 Status of Site Open site; sampled

EXPLORATION DATA

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

CORRELATION DATA

Geological Age Cretaceous
 Geological Source Dakota Formation
 Material Similar To Material reported on SHC Form 645,
Lab No. 31315.
 Specific Gravity (sat.) 2.61 (dry) 2.58
 Los Angeles Wear 30.0 Grade B
 Absorption 1.34 Soundness 0.97
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks NW $\frac{1}{4}$ P. F. Babcock Canton, Kansas
SW $\frac{1}{4}$ Hilda W. Bughman R. R. 1, McPherson, Kansas



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

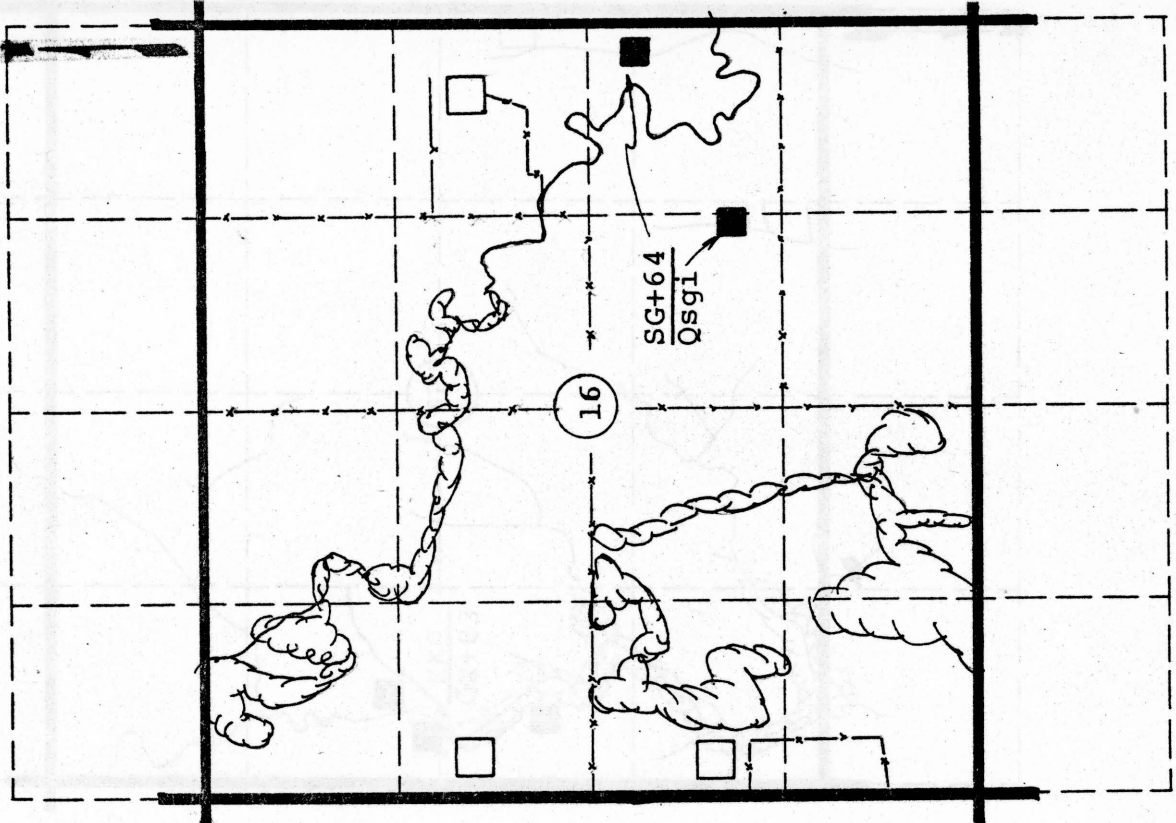
Site No. SG+64 Date September 1965
Qsgi
 Material Sand & Gravel county McPherson
 Location SE 1/4 Sec. 16 Twp. 18S Range 4W
 Owner Mary Murphy et al. 104 S. Chestnut, McPherson, Ks.
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained								G.F.	L.L.	P.I.	
				1 1/2	3/4	3/8	4	8	16	30	50				100
				0	1	4	22	76	96	98	1.22	2.97			

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island and Sappa Formation
 Material Similar To Material reported on SHC Form 619
 No. 59-2 Lab No. 32355
 Specific Gravity (sat.) 2.62 (Dry)
 Los Angeles Wear Grade D 36.6
 Absorption 0.60 Soundness 0.97
 Wt. Cu.Ft. 103.2 Str. Ratio 1 day 1.16, 3 day 1.29
 Remarks The upper portion of these pits contains same contaminated volcanic ash.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

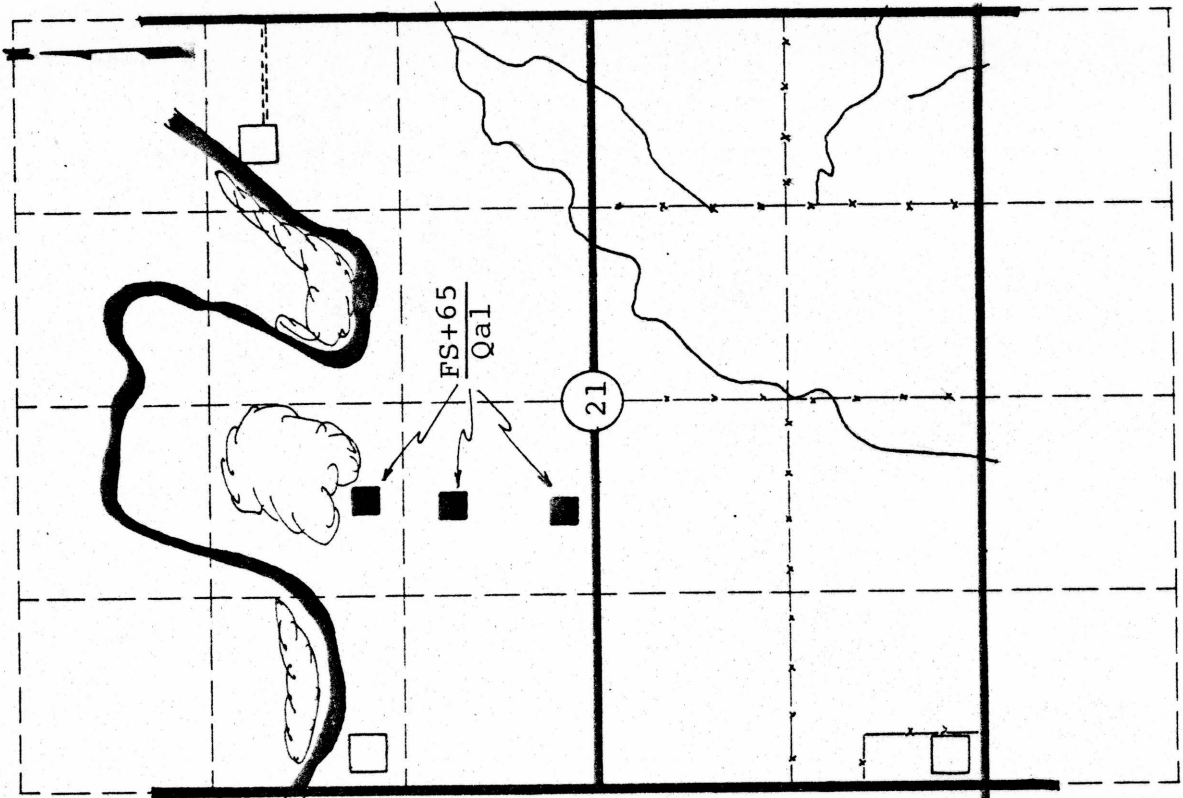
Site No. FS+65 Date September 1965
Qa1
 Material Fine Sand County McPherson
 Location NW $\frac{1}{4}$ Sec. 21 Twp. 17S Range 3W
 Owner Evans Train 312 N. 2nd, Lindsborg, Kansas
 address
 Nature of Deposit Dry Accessibility Good
 Status of Site Open site; sampled

EXPLORATION DATA

Test Hole	Material at bottom of hole	Depth of over-burden	Depth of Material	Percent Retained							Mash 200	G.F.	L.L.	P.I.		
				1 1/2	3/4	3/8	4	8	16	30					50	100
AVE			0	0	0	0	0	0	1	5	30					

CORRELATION DATA

Geological Age Quaternary
 Geological Source Alluvium
 Material Similar To Material reported on SHC form 619
No. 59-16
 Specific Gravity (Set.) (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks This material was most extensively used as base coarse binding material.

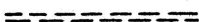















Scale: 1" = 1/4 Mile

APPENDIX III

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

LEGEND

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

STATE HIGHWAY COMMISSION OF KANSAS

MATERIAL SURVEY REPORT

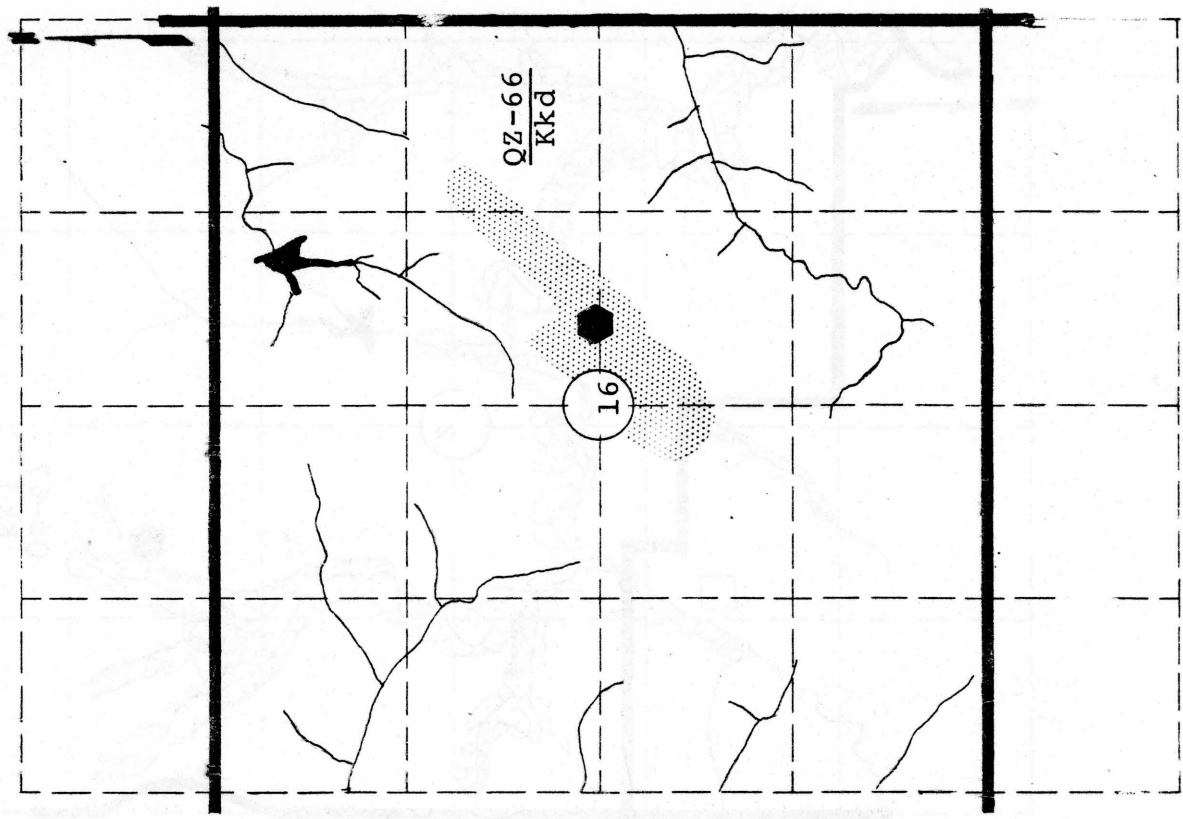
Site No. QZ-66 Date September 1965
Kkd
 Material " Quartzite " County McPherson
 Location E $\frac{1}{2}$ Sec. 16 Twp. 18S Range 1W
 Owner See Remarks Below
 Nature of Deposit Dry Accessibility Fair
 Status of Site Prospective site; not sampled

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	4	8	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 _____
 Mt. Cu.Ft. _____ Str. Ratio _____
 Remarks NW $\frac{1}{4}$ P. H. Schroeder, & Ernest Schroeder,
528 East 6th, Hutchinson, Kansas
N $\frac{1}{4}$ SE $\frac{1}{4}$ Della C. Holdeman et al. & F. W. Holdeman
Hesston, Kansas



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

MATERIAL SURVEY REPORT

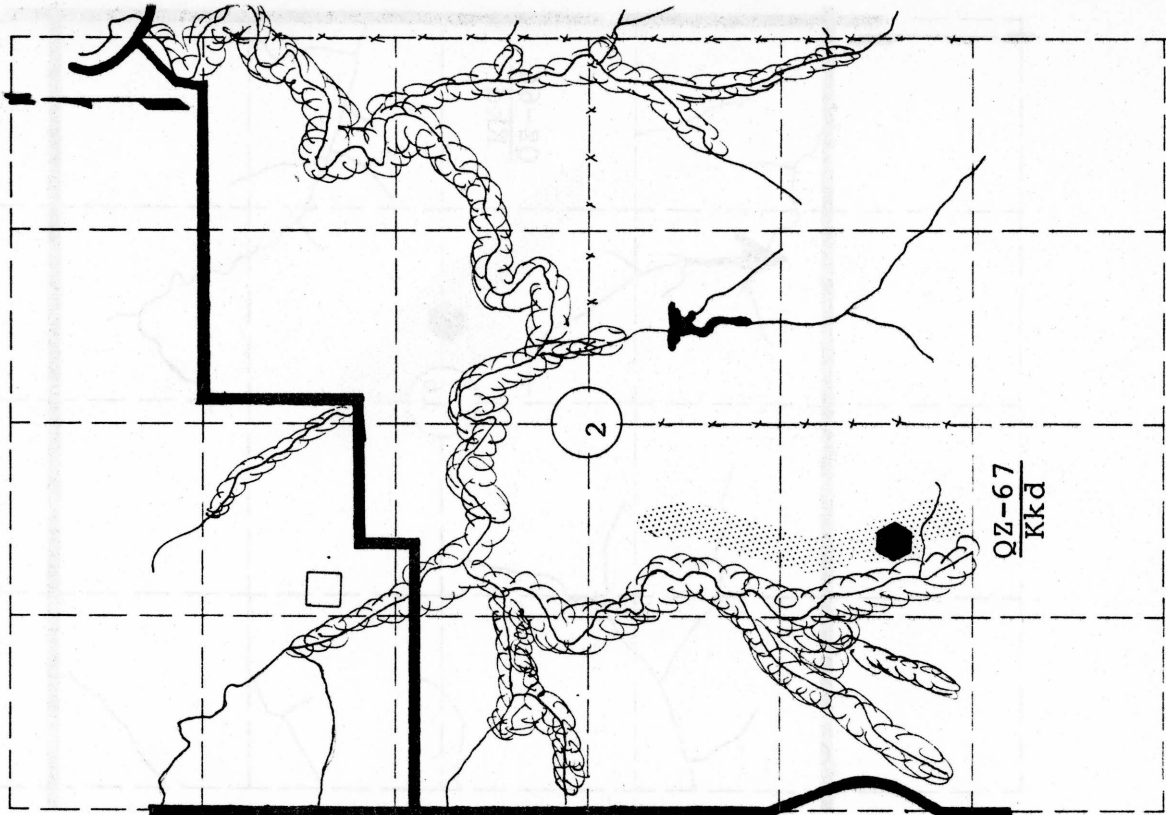
Site No. QZ-67 Date September 1965
Kkd
 Material "Quartzite" County McPherson
 Location E 1/2 SW 1/4 Sec. 2 Twp. 18S Range 2W
 Owner See Remarks Below address
 Nature of Deposit Dry Accessibility POOR
 Status of Site Prospective site; not sampled

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	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 SE 1/4 SW 1/4 Carl D. W. Chinberg et al. R. R., McPherson, Kansas, NE 1/4 SW 1/4 Emory & Abner Norland, R. R. 1, Galva, Kansas.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

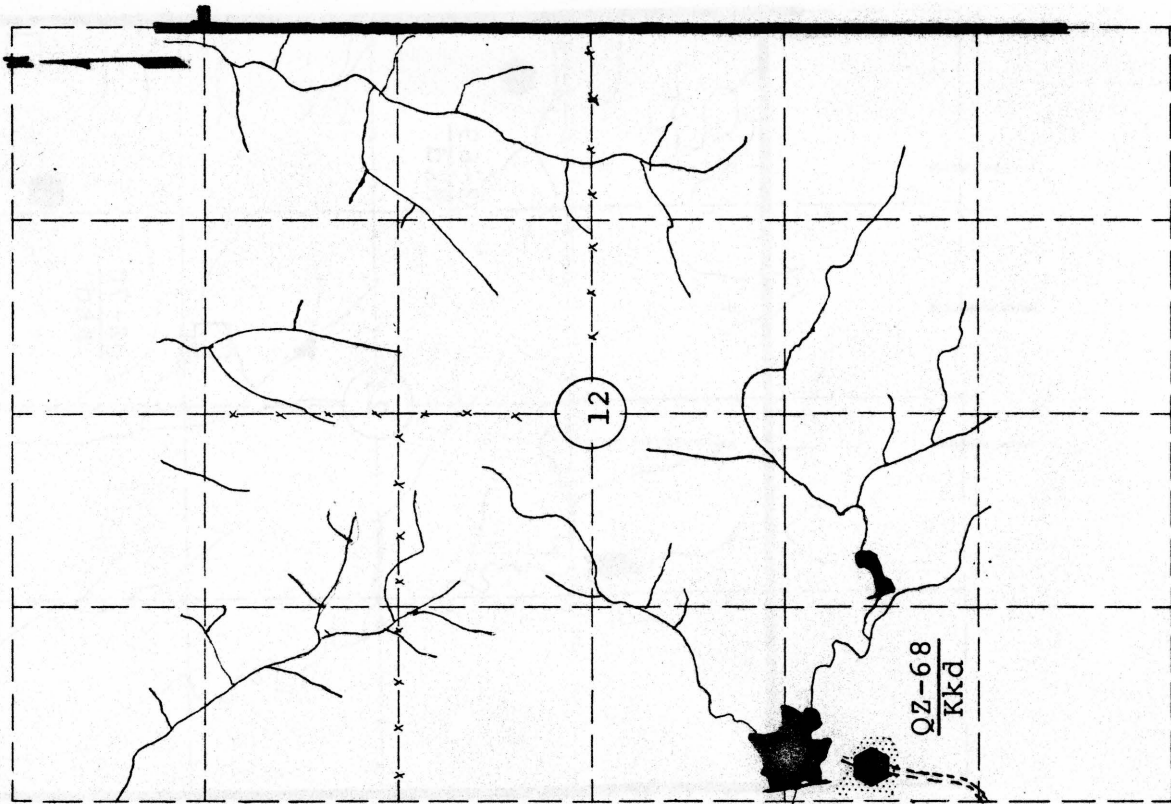
Site No. QZ-68 Date September 1965
Kkd
 Material "Quartzite" County McPherson
 Location SW 1/4 SW 1/4 Sec. 12 Twp. 18S Range 2W
 Owner See Remarks Below address
 Nature of Deposit DRY Accessibility POOR
 Status of Site Prospective site; not sampled

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 Simon Stucky Est., & Samuel Stucky R. R. 2,
McPherson, Kansas



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

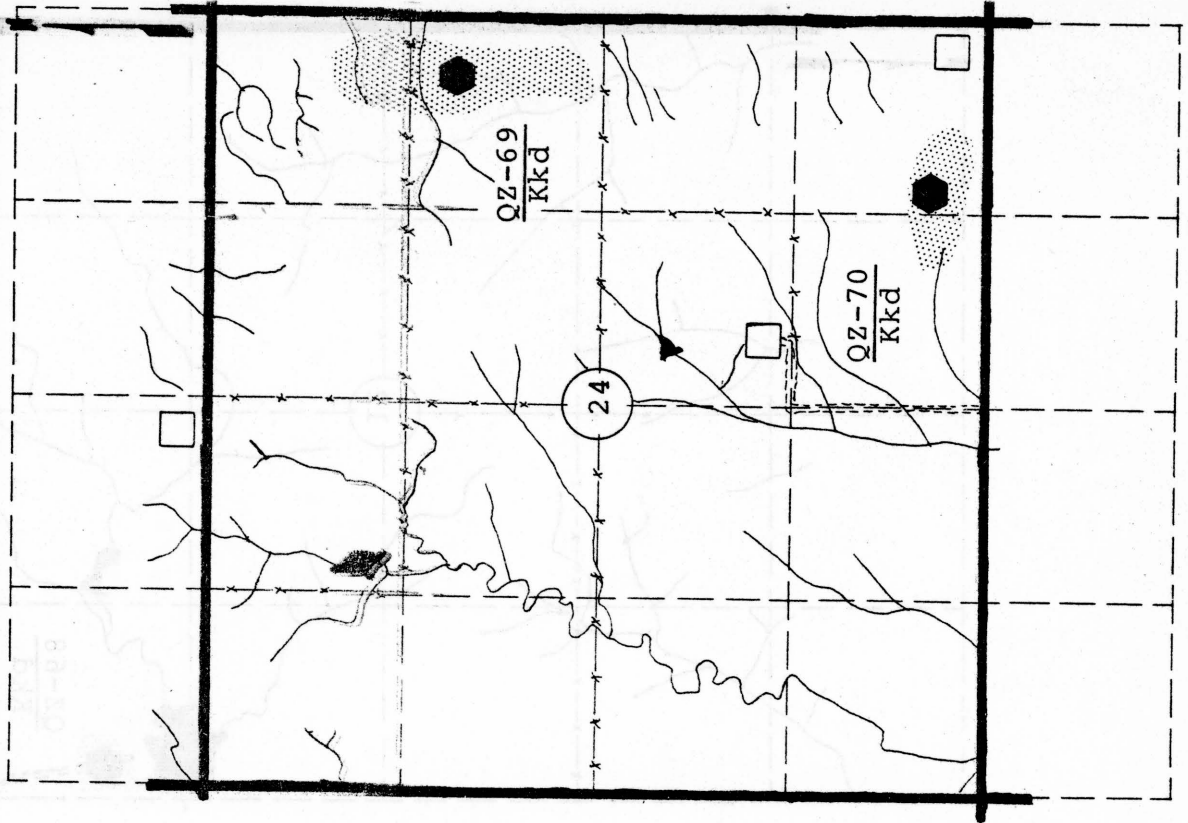
Site No. QZ-69 Date September 1965
Kkd
 Material "Quartzite" County McPherson
 Location S $\frac{1}{2}$ NE $\frac{1}{4}$ Sec. 24 Twp. 17S Range 2W
 Owner See Remarks Below
 name address
 Nature of Deposit Dry Accessibility Fair
 Status of Site Prospective site; not sampled

EXPLORATION DATA

Test Hole	Depth of Bottom of Hole	Depth of over-Burden	Depth of Material	Percent Retained							Wash 200	G.F.	L.L.	P.F.				
				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 Alfred W. Lockhart Est., & N. S. Lockhart
15000 Hayward St., Whittier, California.



MATERIAL SURVEY REPORT

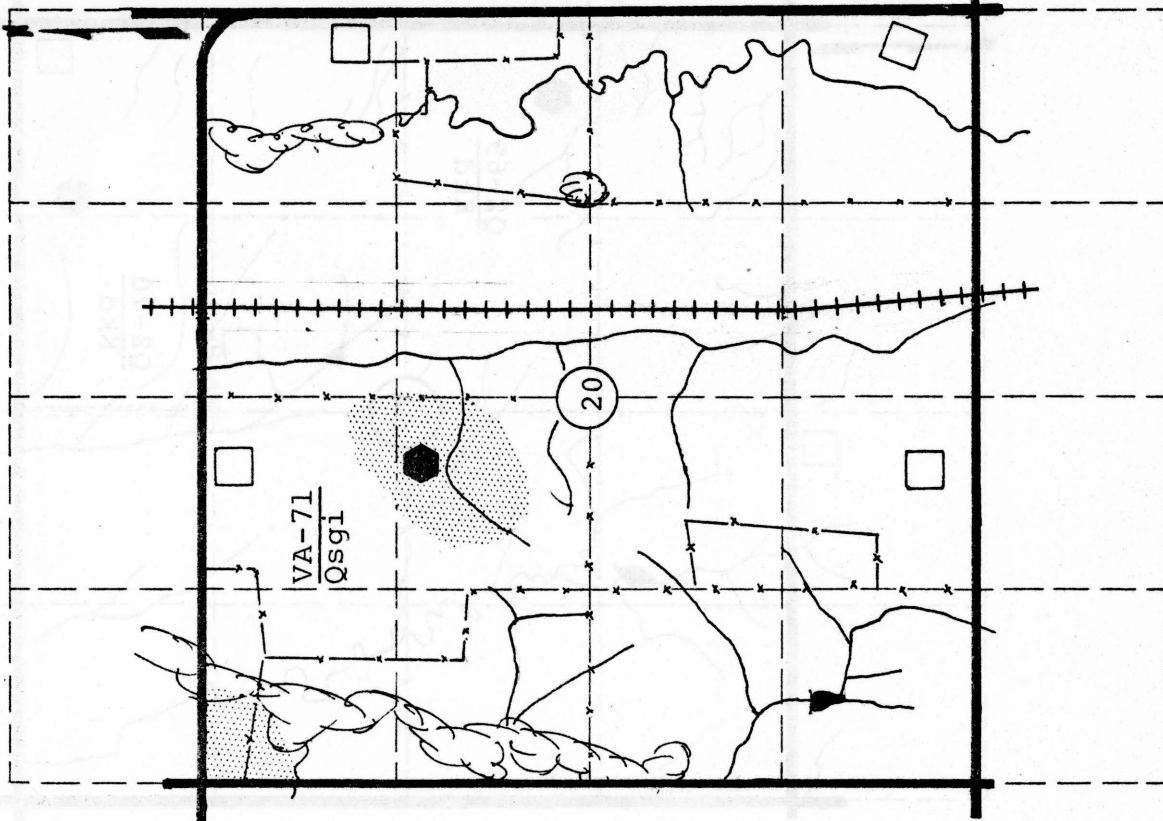
Site No. VA-71 Date September 1965
Qsg1
 Material Volcanic Ash County McPherson
 Location NW 1/4 Sec. 20 Twp. 18S Range 3W
 Owner Abraham K. Friesen Box 701, McPherson, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Prospective site; not sampled

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 Sappa 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 SURVEY REPORT

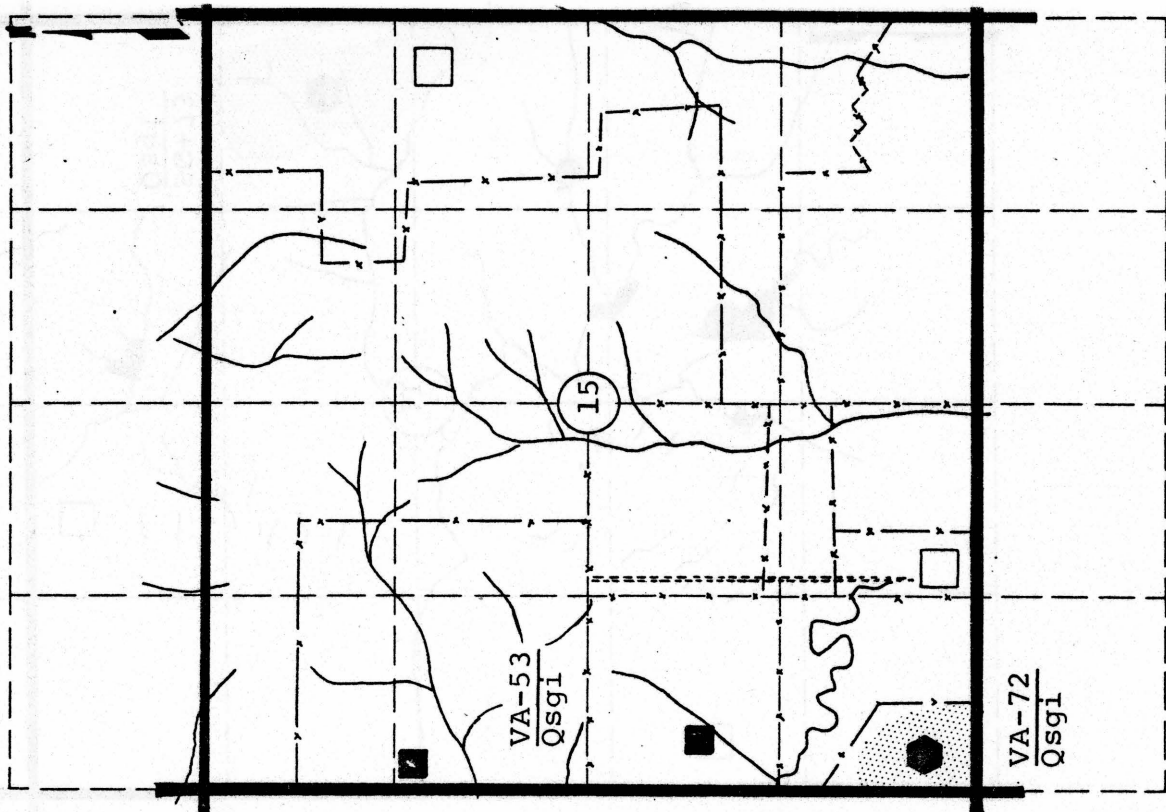
Site No. VA-72 Date September 1965
Qsgl
 Material Volcanic Ash County McPherson
 Location SW $\frac{1}{4}$ Sec. 15 Twp. 18S Range 4W
 Owner G. Elmer Larson et al. R. R. 3, McPherson, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Prospective site; not sampled

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 Sappa 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 SURVEY REPORT

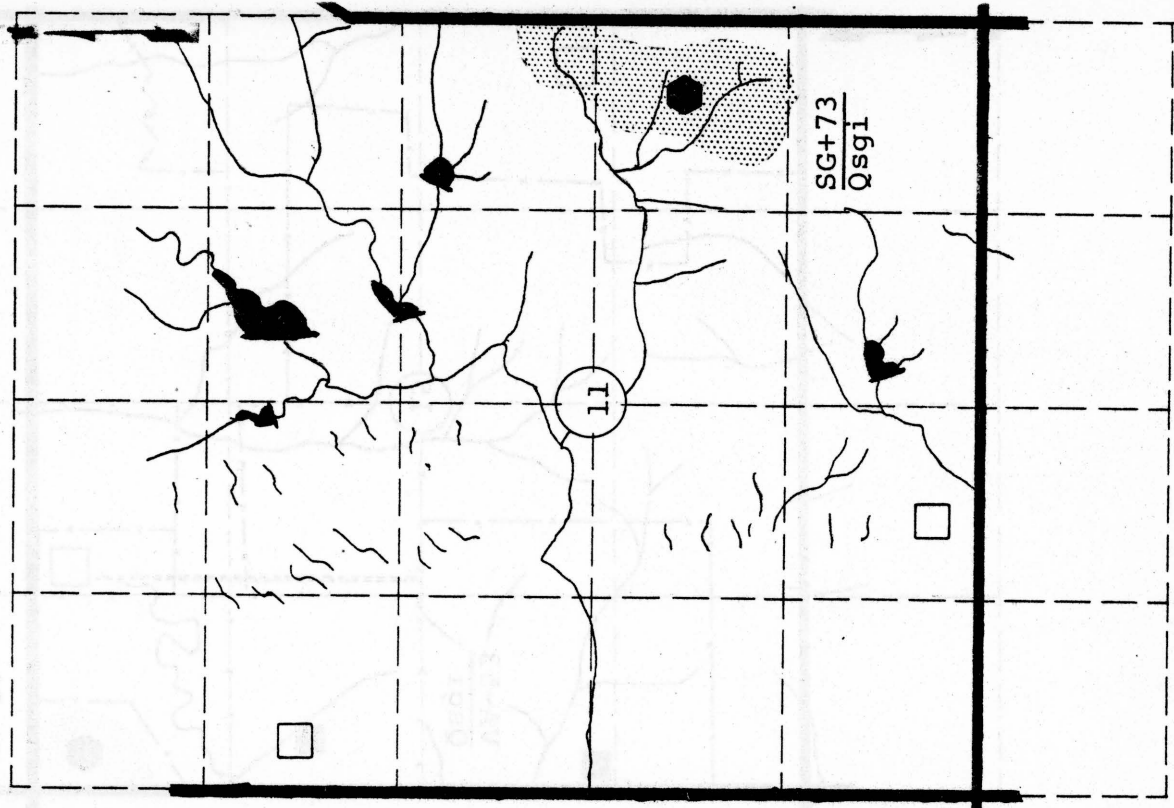
Site No. SG+73 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location SE 1/4 Sec. 11 Twp. 17S Range 5W
 Owner E. Hultgren Marquette, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Prospective site; not sampled

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 Grand Island 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 SURVEY REPORT

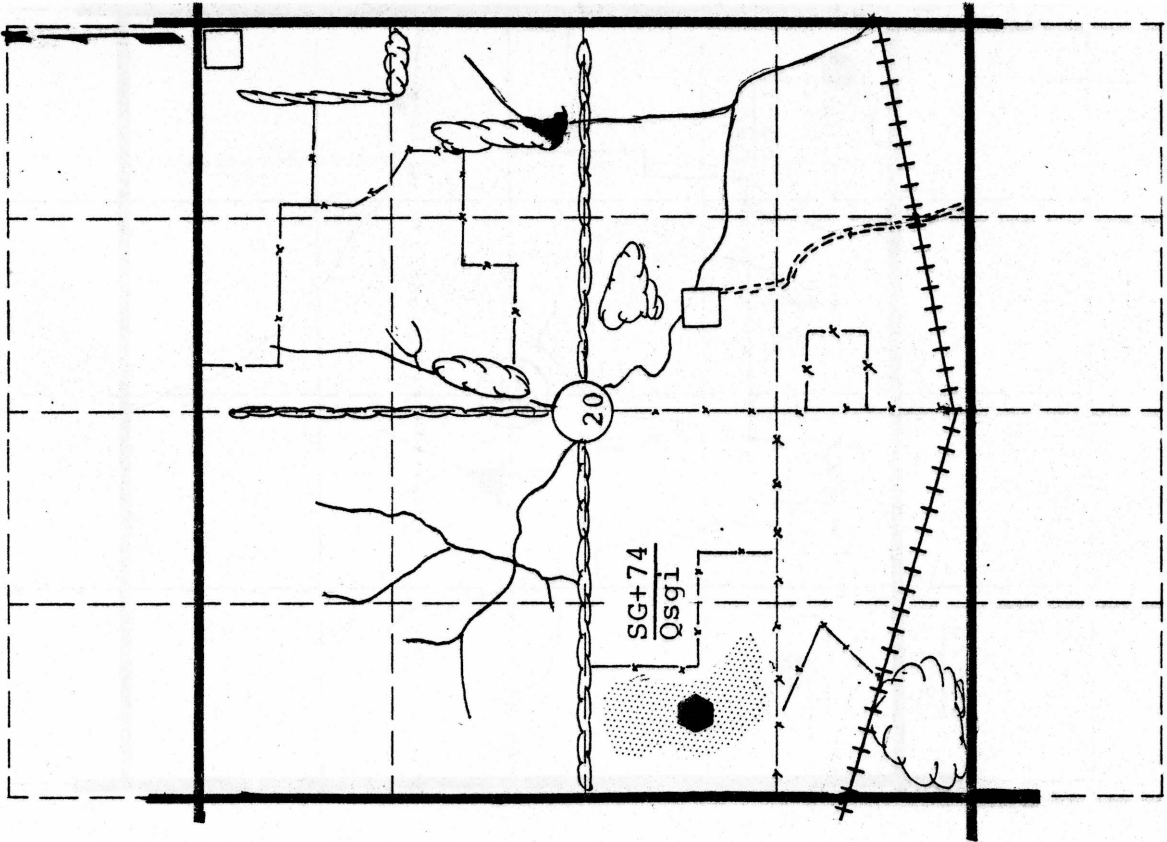
Site No. SG+74 Date September 1965
Qsgl
 Material Sand & Gravel County McPherson
 Location SW $\frac{1}{4}$ Sec. 20 Twp. 17S Range 5W
 Owner Dewey Grooms name Marguette, Kansas address
 Nature of Deposit Dry Accessibility Good
 Status of Site Prospective site; not sampled

EXPLORATION DATA

Test Hole	Material at Bottom of Hole	Depth of overburden	Depth of Material	Percent Retained							Wash 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 Grand Island Formation
 Material Similar To _____
 Specific Gravity (Sat.) _____ (Dry)
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Mt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

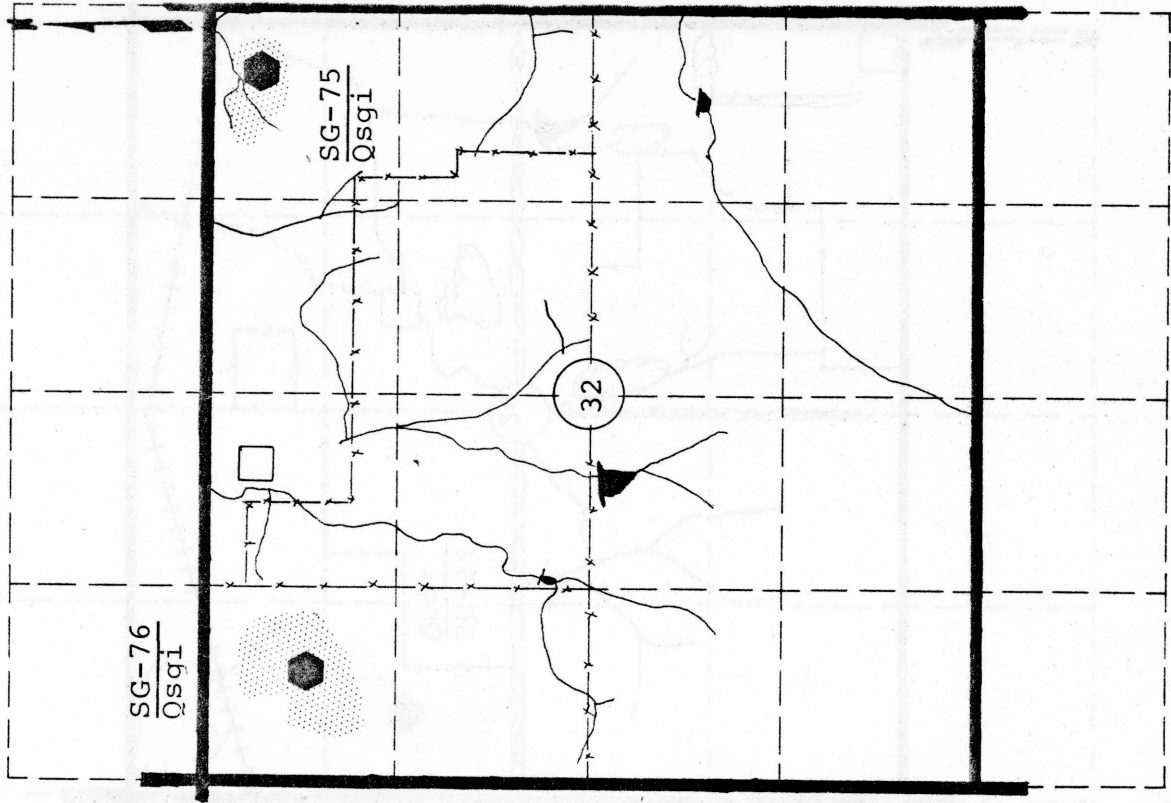
Site No. SG-75 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location NE 1/4 Sec. 32 Twp. 18S Range 4W
 Owner John M. Starks 703 N. Plum, Hutchinson, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Prospective site; not sampled

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 Grand Island 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 SURVEY REPORT

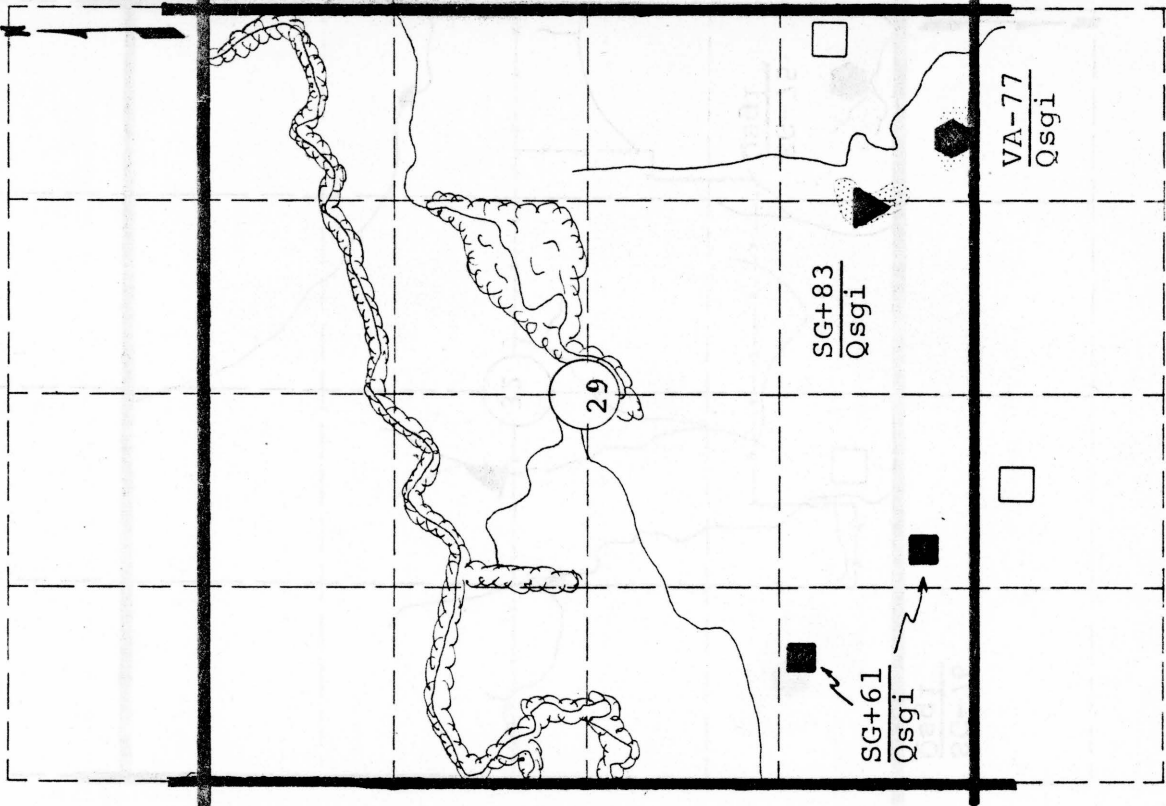
VA-77
 Site No. Qsg1 Date September 1965
 Material Volcanic Ash County McPherson
 Location SE 1/4 SE 1/4 Sec. 29 Twp. 18S Range 4W
 Owner Virgil & Willard Sandahl R. R. 3, McPherson, Kansas
 Nature of Deposit Dry Accessibility Good
 Status of Site Prospective site; not sampled

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 Sappa 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 SURVEY REPORT

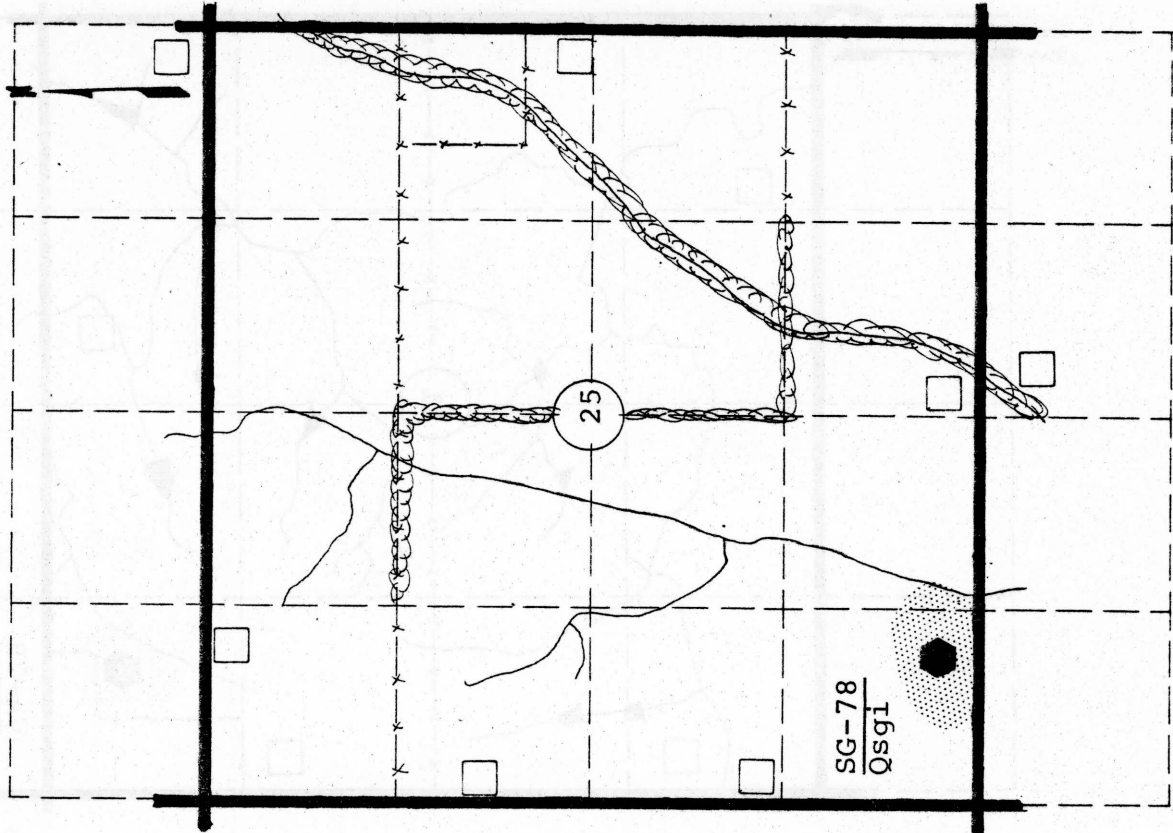
Site No. SG-78 Date September 1965
Qsgl
 Material Sand & Gravel County McPherson
 Location SW $\frac{1}{4}$ Sec. 25 Twp. 21S Range 1W
 Owner R. G. Blosser R. R. 1, Hesston, Kansas
 name address
 Nature of Deposit DRY Accessibility Good
 Status of Site Prospective site; not sampled

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 Grand Island 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 SURVEY REPORT

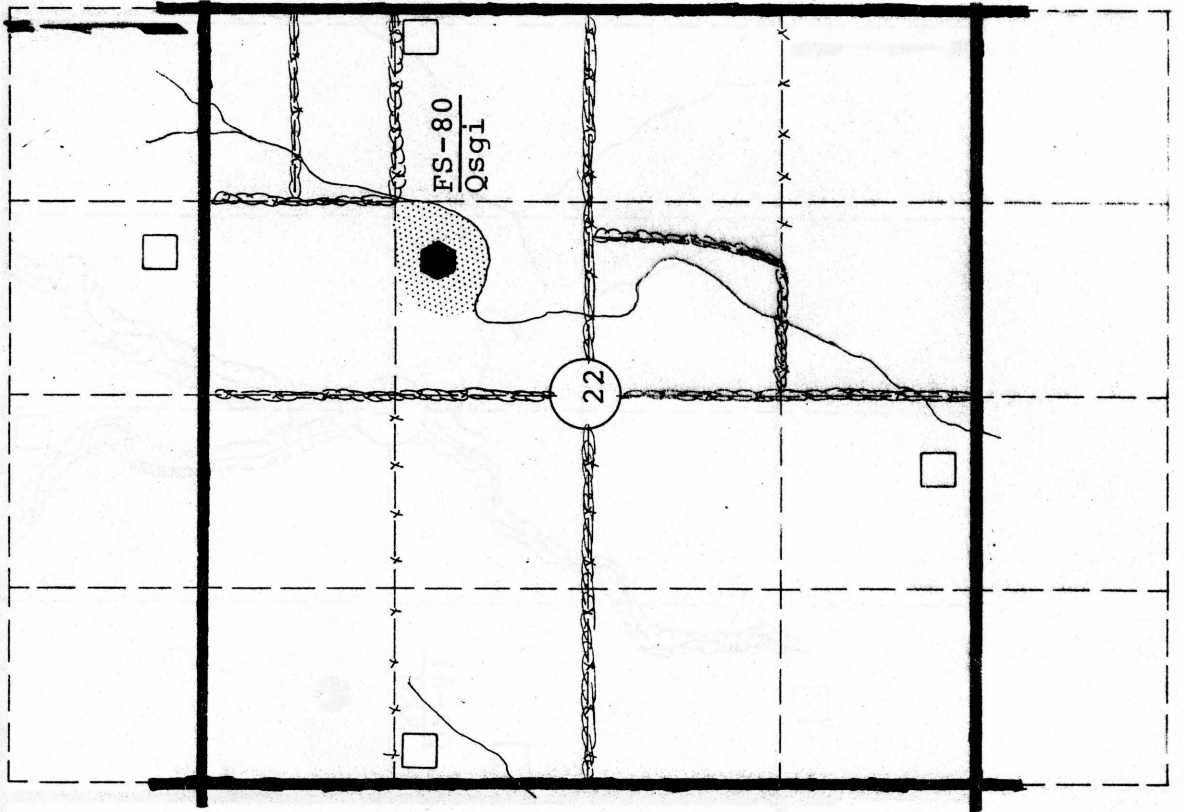
Site No. FS-80 Date September 1965
Qsgi
 Material Fine Sand County McPherson
 Location SW 1/4 NE 1/4 Sec. 22 Twp. 20S Range 1W
 Owner Nelson W. Krehbiel Moundridge, Kansas
 name address
 Nature of Deposit Dry Accessibility POOR
 Status of Site Prospective site; not sampled

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 Grand Island 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 SURVEY REPORT

QZ-81
Kkd

Site No. _____ Date September 1965

Material "Quartzite" County McPherson

Location SW 1/4 Sec. 15 Twp. 18S Range 1W

Owner Lloyd A. Bishop name R. R. 1, Canton, Kansas address

Nature of Deposit Dry Accessibility Good

Status of Site Prospective site; not sampled

EXPLORATION DATA

Test Hole	Material 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 Cretaceous

Geological Source Dakota Formation

Material Similar To _____

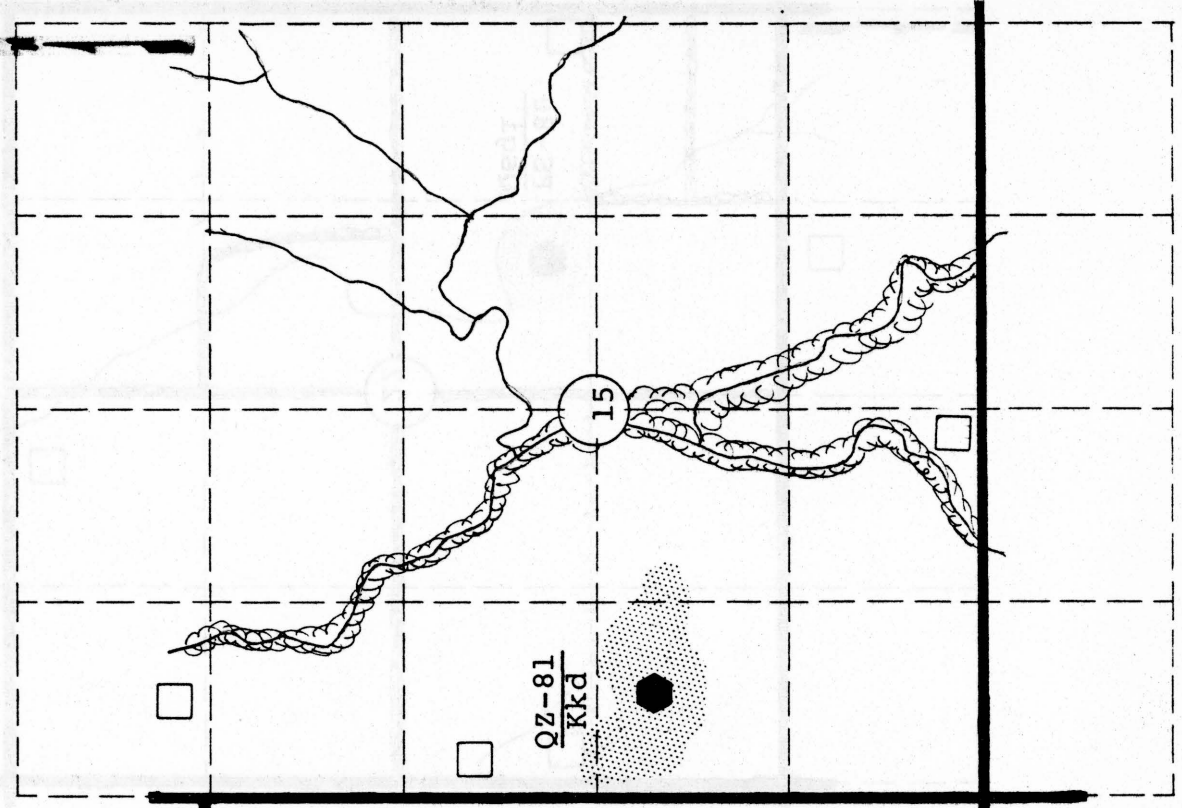
Specific Gravity (Sat.) _____ (Dry) _____

Los Angeles Wear _____

Absorption _____ Soundness _____

Wt. Cu.Ft. _____ Str. Ratio _____





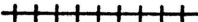





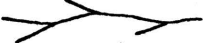



Remarks _____



APPENDIX IV

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

LEGEND

	Trail or lane		Prospective materials site; sampled
	Road		Center of section
	Railroad		Farm site
	Hedge or trees		Cemetery
	Major streams		School
	Intermittent streams		Church
	Pond or lake		Town or city

MATERIAL SURVEY REPORT

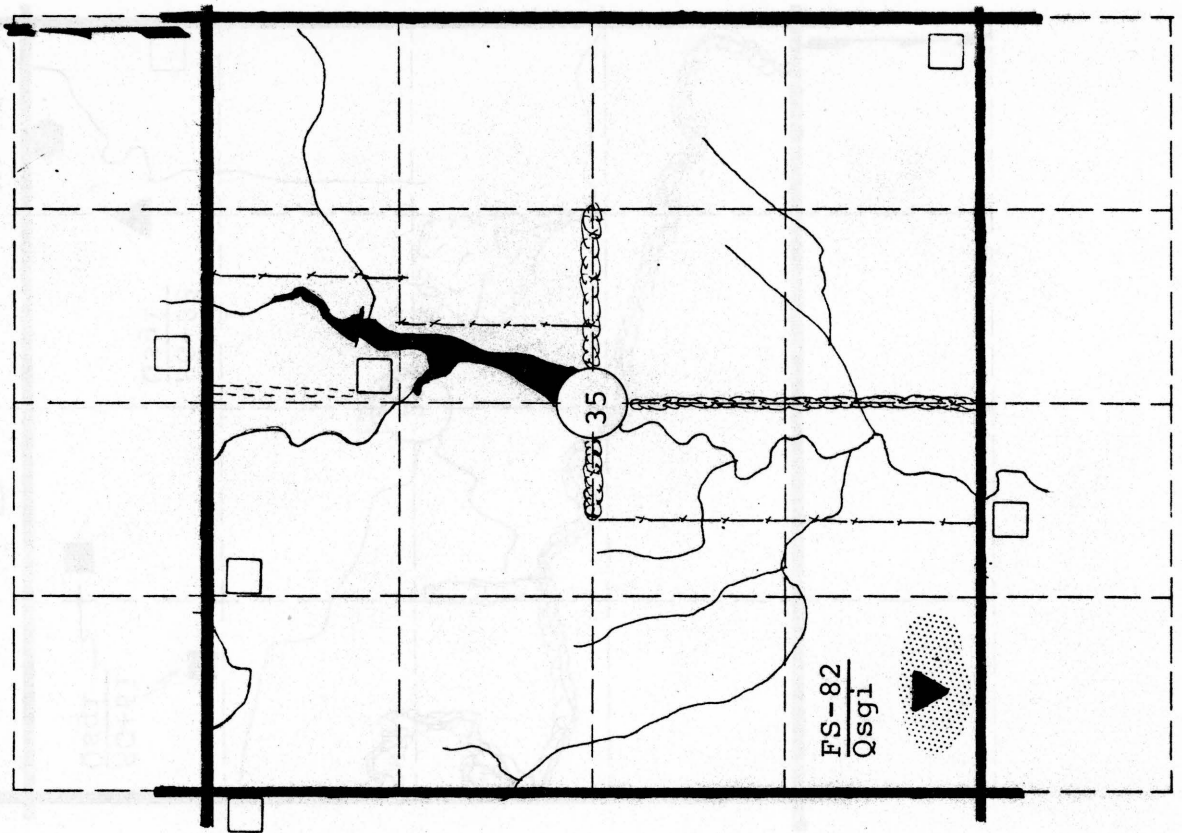
Site No. SG-82 Date September 1965
Qsg1
 Material Sand & Gravel County McPherson
 Location SW 1/4 Sec. 35 Twp. 19S Range 1W
 Owner Elwood Koehn Canton, Kansas address
 Nature of Deposit Dry Accessibility Good
 Status of Site Prospective site; sampled

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					100
AVE				0	0	0	1	5	17	46	70					

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island Formation
 Material Similar To Material reported on SHC Form 619,
No. 59-4.
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

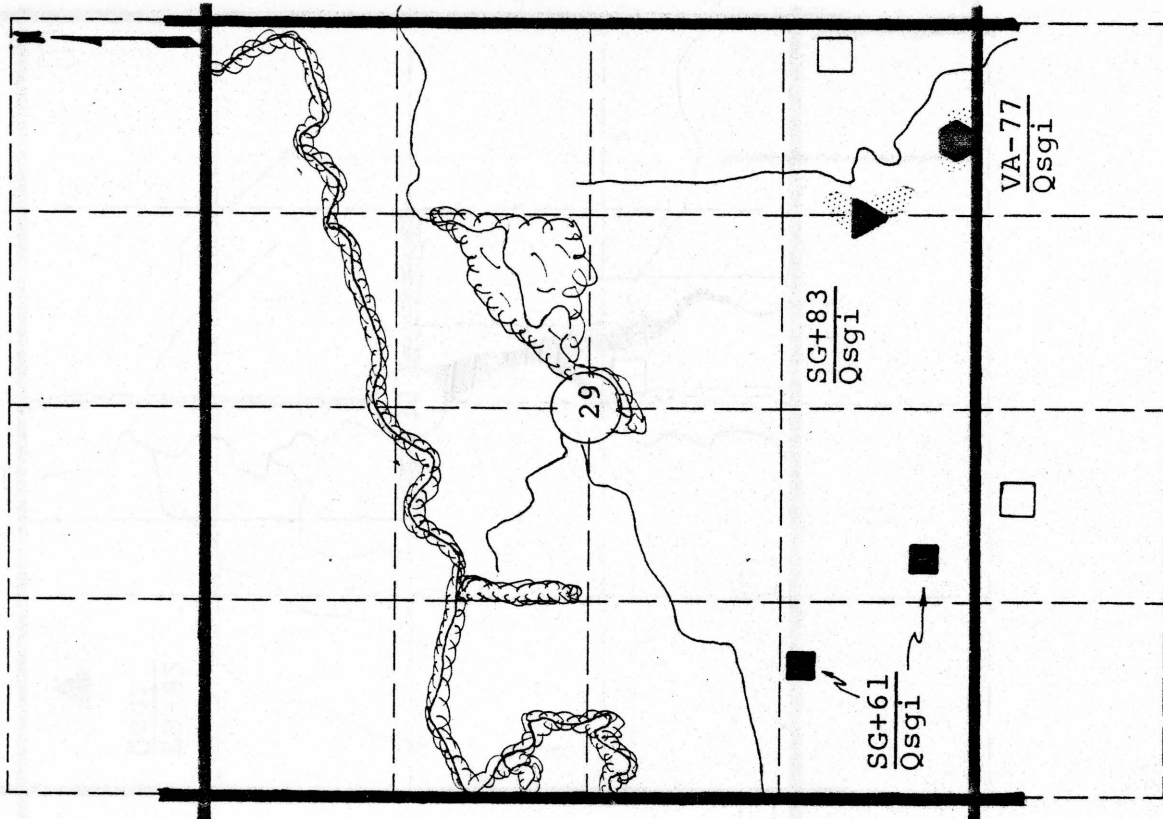
SG+83
 Site No. Qsg1 Date September 1965
 Material Sand & Gravel County McPherson
 Location SE 1/4 SE 1/4 Sec. 29 Twp. 18S Range 4W
 Owner Virgil & Willard H. Sandahl, R. R. 3, McPherson, Ks.
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Prospective site; sampled

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				
1		5	25				1	2	10	2828	3940.69	22	6	
6			76			1	3	19	52	7882	928.83.29	25	9	

CORRELATION DATA

Geological Age Quaternary
 Geological Source Grand Island Formation
 Material Similar To Material reported on SHC Form 619
 No. 59-15
 Specific Gravity (sat.) 2.59 (dry)
 Los Angeles Wear 37.8 Grade D
 Absorption 1.0 Soundness 0.96
 Mt. Cu.Ft. 103.8 Str. Ratio 1 day 1.16, 3 day 1.29
 Remarks The gradations above are the high and low extremes of several samples taken from this site.



Scale: 1" = 1/4 Mile

MATERIAL SURVEY REPORT

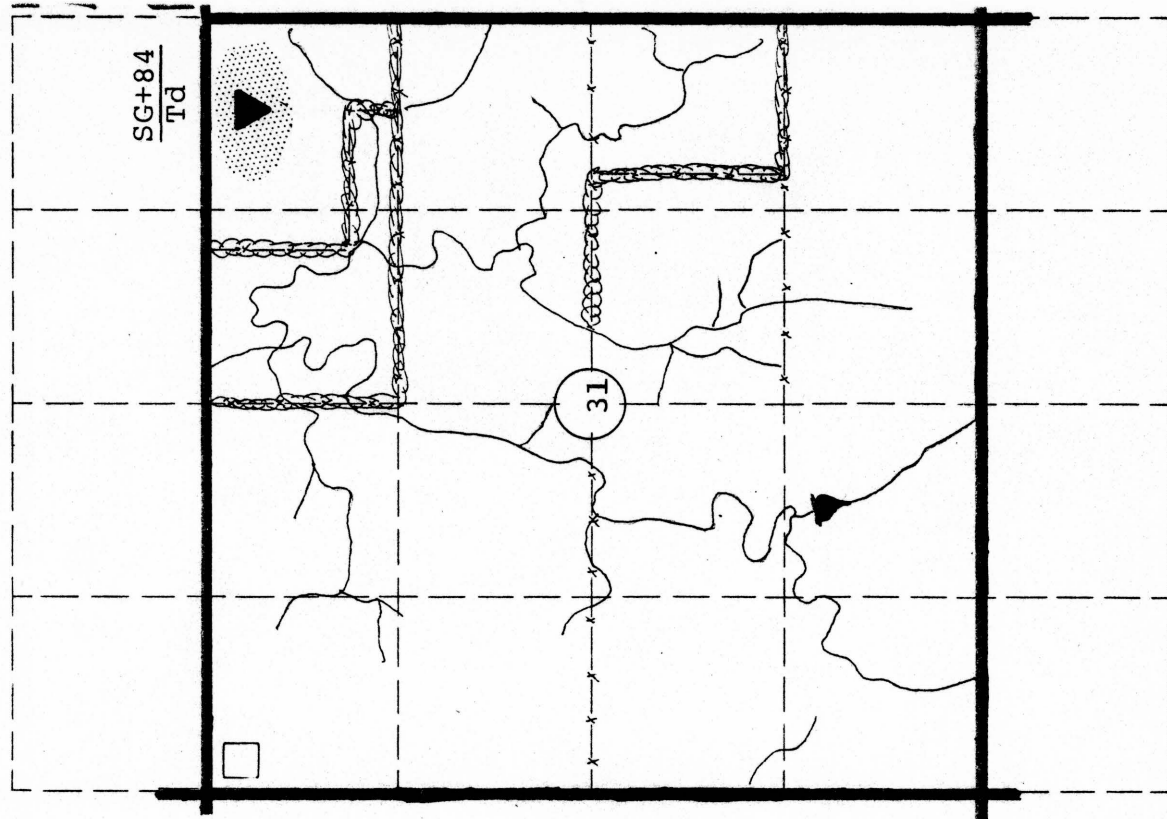
Site No. SG+84 Date September 1965
Td
 Material Sand & Gravel County McPherson
 Location NE 1/4 Sec. 31 Twp. 18S Range 1W
 Owner E. E. Goering et al. Moundridge, Kansas
 name address
 Nature of Deposit Dry Accessibility Good
 Status of Site Prospective site; sampled

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	100
AVE				0	0	0	0	0	0	15	47	81	9			

CORRELATION DATA

Geological Age Quaternary
 Geological Source Delmore Formation
 Material Similar To Material reported on SHC Form 619
No. 59-9A.
 Specific Gravity (Sat.) _____ (Dry) _____
 Los Angeles Wear _____
 Absorption _____ Soundness _____
 Wt. Cu.Ft. _____ Str. Ratio _____
 Remarks _____



Scale: 1" = 1/4 Mile

GLOSSARY OF SIGNIFICANT TERMS

- Absorption:** Determined by tests performed in accordance with A.A.S.H.O. (American Association of State Highway Officials) designation T85.
- Aggrade:** To raise the grade or level of a river valley or stream bed by depositing particles of clay, silt, sand, and gravel.
- Alluvium:** A deposit of clay, silt, sand, or gravel laid down by flowing water.
- Arkosic gravel:** Gravel composed of mineral fragments derived from weathered granite.
- Chert:** A dull, flint-like, siliceous rock.
- Concretion:** Oddly shaped nodules that occur in sedimentary rocks which form gradually by precipitation around definite nucleus.
- Consolidated deposit:** Deposit of limestone, shale, or sandstone. In Kansas, this term generally applies to rock older than Pliocene age.
- Cross bedding:** Sedimentary deposits inclined to the general stratification; oblique layering extending diagonally across the individual beds.
- Dolomitic limestone:** Limestone containing $MgCO_3$ (Magnesium Carbonate).
- Geologic period:** A unit of geologic time, Mississippian, Pennsylvanian, and Permian are examples.
- Geologic unit:** This term is used in this report to denote:
1. a geologic formation, 2. a geologic member, and 3. an unconsolidated deposit of Pleistocene age.
- Glacial deposit:** Stratified and (or) unstratified deposits of clay, silt, sand, gravel, and boulders laid down by glaciers or glacial meltwater.
- Gradation factor:** The value obtained by adding the percentages of material retained on the $1\frac{1}{2}$ ", $3/4$ ", $3/8$ ", 4, 8, 16, 30, 50, and 100 sieves respectively and dividing the sum by 100.
- Igneous rocks:** Rocks produced under conditions involving great heat; as rocks crystallized from a molten material.
- Light type surfacing:** A surface course constructed from aggregate which is not bound by water, cement, or bituminous material.

Liquid limit: Determined by tests performed in accordance with section Y1-18 of the State Highway Commission of Kansas Standard Specifications, 1966 edition.

Los Angeles wear: Determined by tests performed in accordance with A.A.S.H.O. designation T96 as modified by section Y1-14 of the State Highway Commission of Kansas Standard Specifications, 1966 edition.

Material source bed: A particular geologic unit, consolidated or unconsolidated, that provides material for construction purposes.

Matrix: The binding material which bonds or encloses sand and gravel particles at their place of deposition.

Metamorphic rock: Rock which has been crystallized or otherwise altered by intense heat or pressure.

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

Plastic index: Determined by tests performed in accordance with section Y1-18 of the State Highway Commission of Kansas Standard Specifications, 1966 edition.

Pleistocene series: Deposits laid down during the Pleistocene Epoch.

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

"Quartzite": In this report the term is applied to calcium cemented zones in the Dakota Formation which are so well bonded that upon fracturing the break will penetrate the individual grains rather than break around them.

Soundness: Determined by tests performed in accordance with section Y1-15 of the State Highway Commission of Kansas Standard Specifications, 1966 edition.

Specific gravity: Determined by tests performed in accordance with A.A.S.H.O. designation T84 for sand and gravel and T85 for crushed stone.

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

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

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

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

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