

APPENDIX IV

The following Site Data Forms are designated as Open Sites, Sampled. The sites described herein are depicted on the county materials map as a "●".

MATERIAL SURVEY REPORT

EXPLORATION DATA

[illegible]

Estimated Quantity	Quantity 200,000+ Tons
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Plattsmouth Limestone

Member	Geological Source	Geological Age	Correlation Data
Oread Limestone		Pennsylvanian	

MATERIAL SIMILAR TO SHC Lab. Nos. 10263 and 21260

SHC Form 216 #16-24

REMARKS:	SHC Lab. Nos.	
	10263	21260

Sp. Gr. (Saturated)	2.56	2.63
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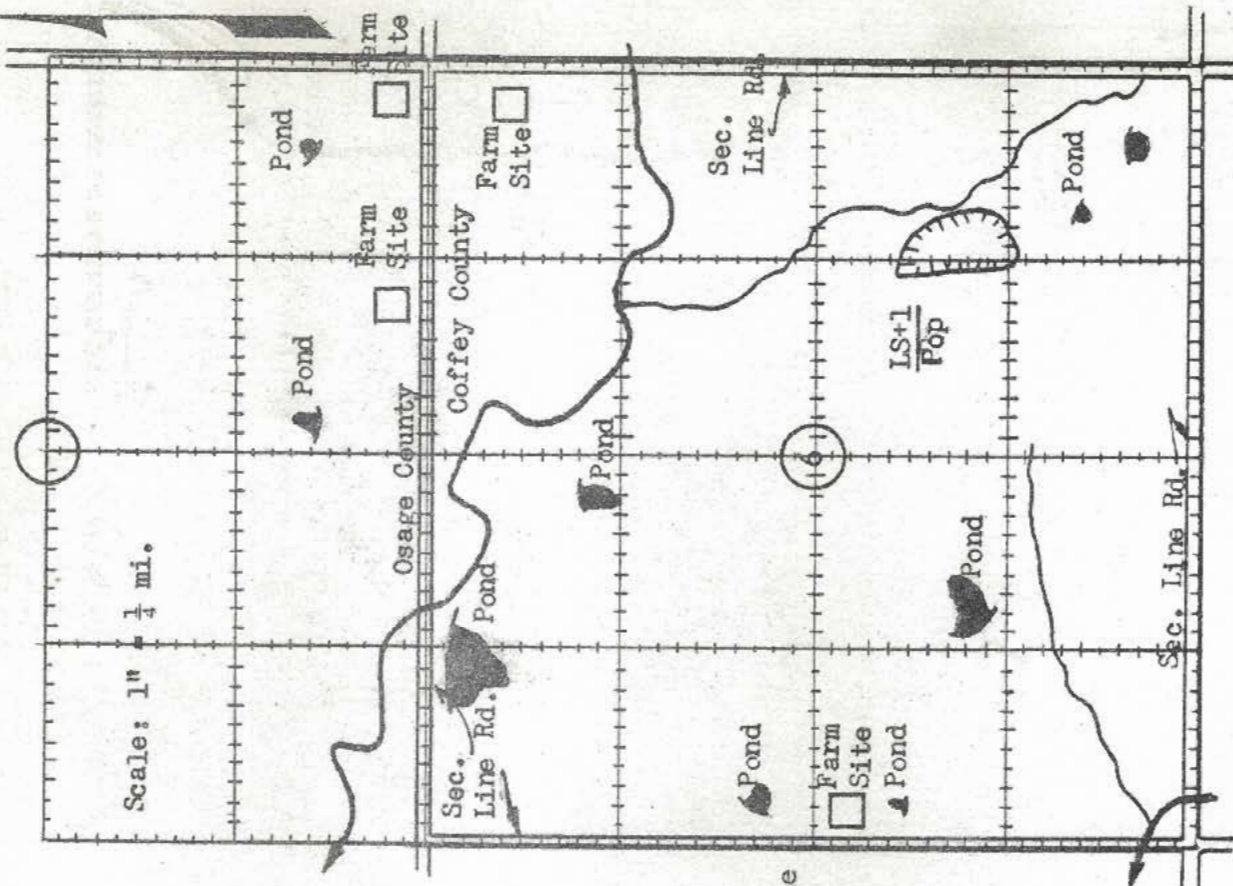
Sp. Gr. (Dry)	2.48	2.59
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Los Angeles Abrasion	35.8%	27.5%
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Absorption	3.15%	1.56%
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Soundness	0.92	0.96
0.92	0.92	0.96
0.96	0.92	0.96

NOTE: Ledge contains many thin shale seams.



$$\frac{LS+2}{Pop}$$

SITE NO. _____ DATE _____
 MATERIAL Limestone COUNTY Coffey
 LOCATION NE 1/4 NE 1/4 SEC. 32 TWP. 20S RANGE 16E
 OWNER Cecil E. Huffman Burlington, Kansas
 name address
 TENANT _____ name address
 NATURE OF DEPOSIT Dry ACCESSIBILITY Good
 STATUS OF SITE Open Site: Sampled

[illegible]

	Estimated Quantity - Unlimited
1000	
2000	
3000	
4000	
5000	
6000	
7000	
8000	
9000	
10000	
11000	
12000	
13000	
14000	
15000	
16000	
17000	
18000	
19000	
20000	
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44000	
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87000	
88000	
89000	
90000	
91000	
92000	
93000	
94000	
95000	
96000	
97000	
98000	
99000	
100000	

CORRELATION DATA

Plattsmouth Limestone member

GEOLOGICAL AGE	GEOLOGICAL SOURCE	Oread Limestone Fm
Pennsylvanian		

MATERIAL SIMILAR TO SHC Lab. No. 78610 and 94874

SHC Form 216 #16-20

REMARKS:	SHC Lab. Nos.	78610	94874

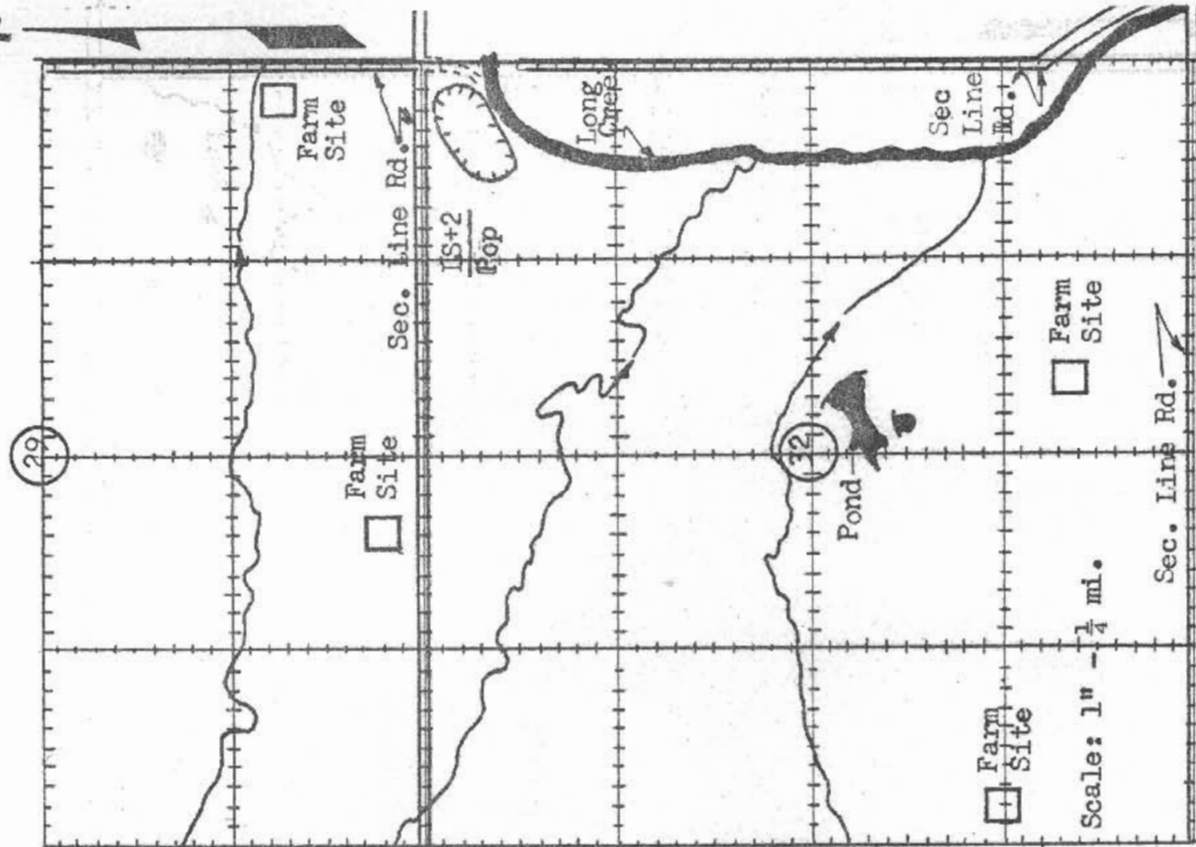
Sp. Gr. (Saturated)	2.66
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Sp. Gr. (Dry) 2.52

Los Angeles Abrasion	26.5% (A)	30.4% (B)
		

Absorption	1.19%	2.57%
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Soundness .96 .95



MATERIAL SURVEY REPORT

SITE NO. _____ DATE _____
 MATERIAL Limestone COUNTY Coffey
 LOCATION NW 1/4 SEC. 2 TWP. 21S RANGE 13E
 OWNER N 1/2 Lloyd Jones Box M, Emporia, Kansas
 TENANT S 1/2 Mary J. Peddecord, 721 N. Topeka, Wichita, Kansas
 NATURE OF DEPOSIT Dry ACCESSIBILITY Good
 STATUS OF SITE Permanent Crushing Operation

[illegible]

Curzon-Hartford
Limestone members
Topeka Limestone Fm

CORRELATION DATA

Topeka Limestone Fm.

GEOLOGICAL AGE Pennsylvanian

MATERIAL SIMILAR TO
SHC Lab. Nos. 10061, 14900 and 21259

SHC Form 216 #16-21

REMARKS:	SHC Lab. Nos.	
	10061	14900
		21259

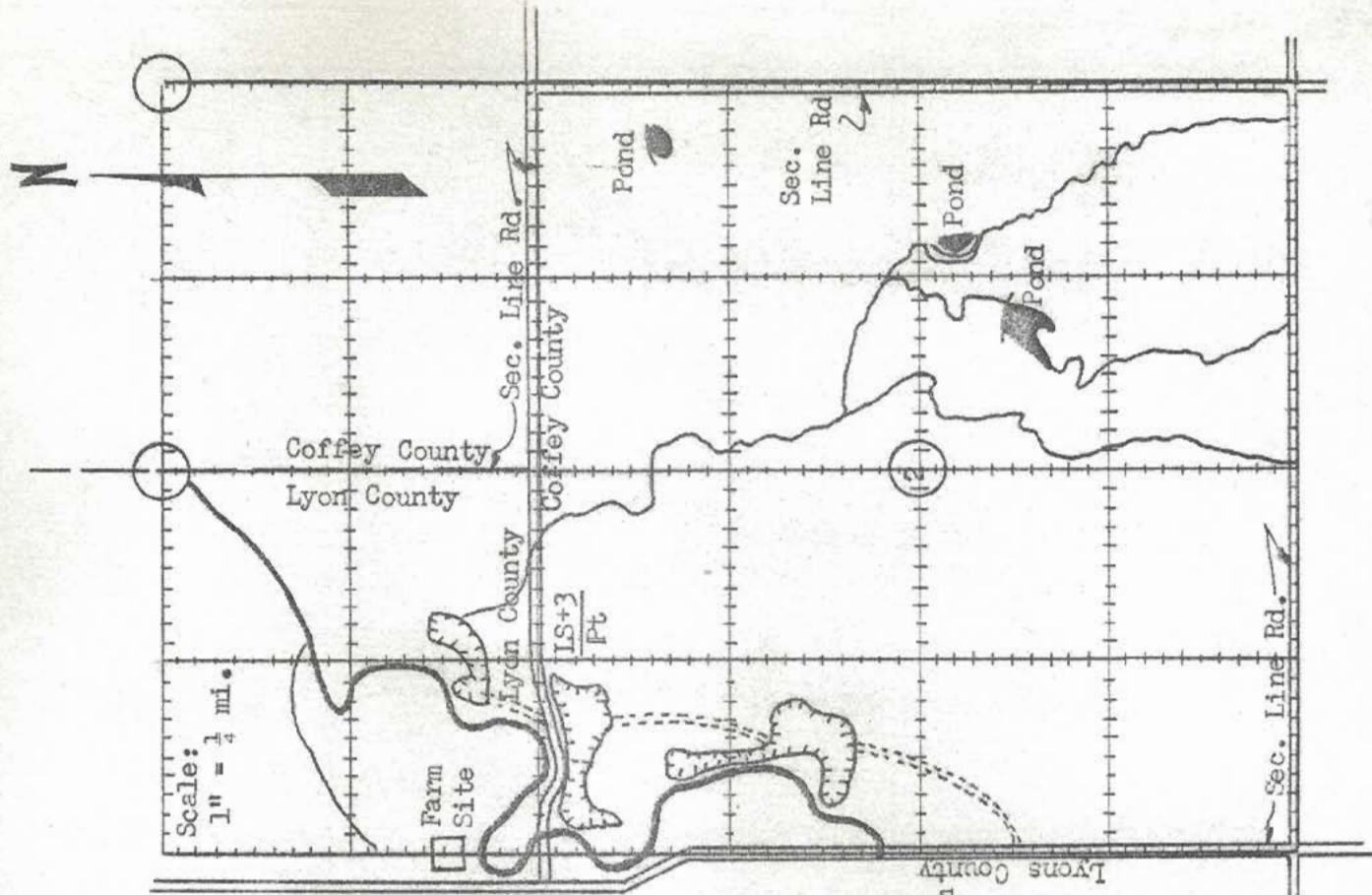
Sp. Gr. (Saturated)	2.58	2.58	2.57
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Sp. Gr. (Dry)	2.53	2.53	2.52
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	Los Angeles	Abrasion	29.0% (B)	28.9% (B)	33.0% (B)

Absorption	2.12%	2.16%	2.25%
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Soundness	0.98	0.98	0.97



$$\frac{L_S + L_I}{Pot}$$

May 1963

MATERIAL Limestone COUNTY Coffey
LOCATION N 1/2 SW 1/4 SEC. 21 TWP. 21S RANGE 16E

OWNER P. J. & Frances D. Kelley % E. T. Boneurant,
63 East Bessie Road, Henderson, Nevada

TENANT _____ name _____ address _____
NATURE OF DEPOSIT _____ Dry _____ ACCESSIBILITY _____ Good _____

STATUS OF SITE Open and producing

[illegible][illegible]

ESTIMATED QUANTITY - 100,000 TONS	CORRELATION DATA	GEOLOGICAL AGE	GEOLOGICAL SOURCE
		Pennsylvanian	Toronto Limestone member
			Oread Limestone Fm

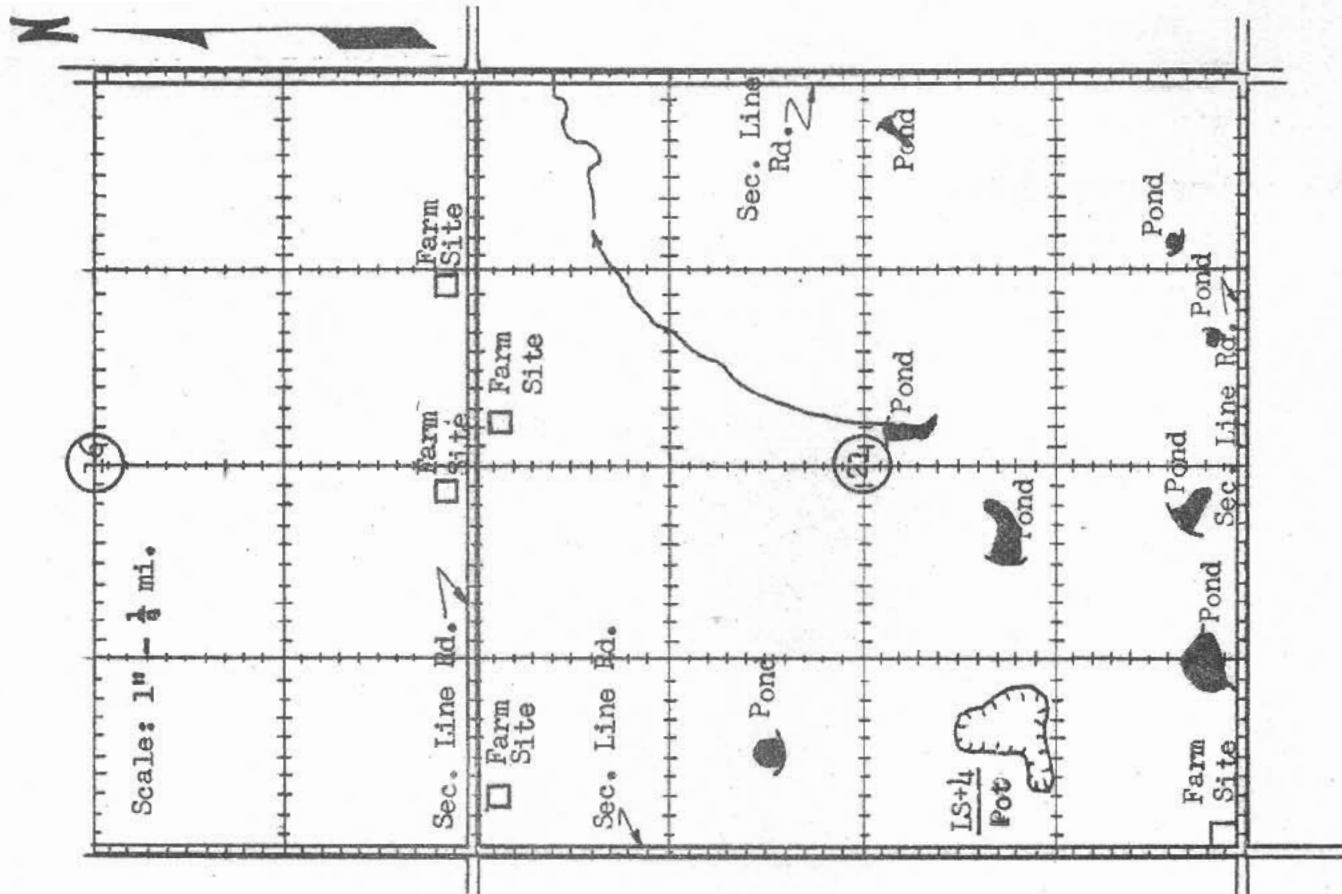
GEOLOGICAL AGE	Pennsylvanian	GEOLOGICAL SOURCE	Oread Limestone Fm
MATERIAL SIMILAR TO	SHC Lab. Nos. 9255	95625 and	21261

REMARKS:	SHC Lab. Nos.	95625	21261
Sp. Gr. (Saturated)	2.51	2.45	2.48

Sp. Gr. (Dry)	2.41	2.33	2.36
Los Angeles Abrasion	31.4% (B)	34.6% (B)	38.18% (B)

Absorption	4.46%	5.26%	4.90%
Soundness	0.96	0.91	0.95

NOTE: 2 ledges (5 to 6 foot each) separated by a six inch shale seam.



$$\frac{LS+5}{pkc}$$

EXPLORATION DATA

[illegible]

Estimated quantity 100,000+ Tons

Clay Creek
Limestone member
Kanwaka Shale Fm

CORRELATION DATA

GEOLOGICAL AGE Pennsylvanian GEOLOGICAL SOURCE

MATERIAL SIMILAR TO SHC Lab. Nos. 9909 and 21262

SHC Form 216 #16-23

REMARKS:	SHC Lab. No.	S
	9909	21262

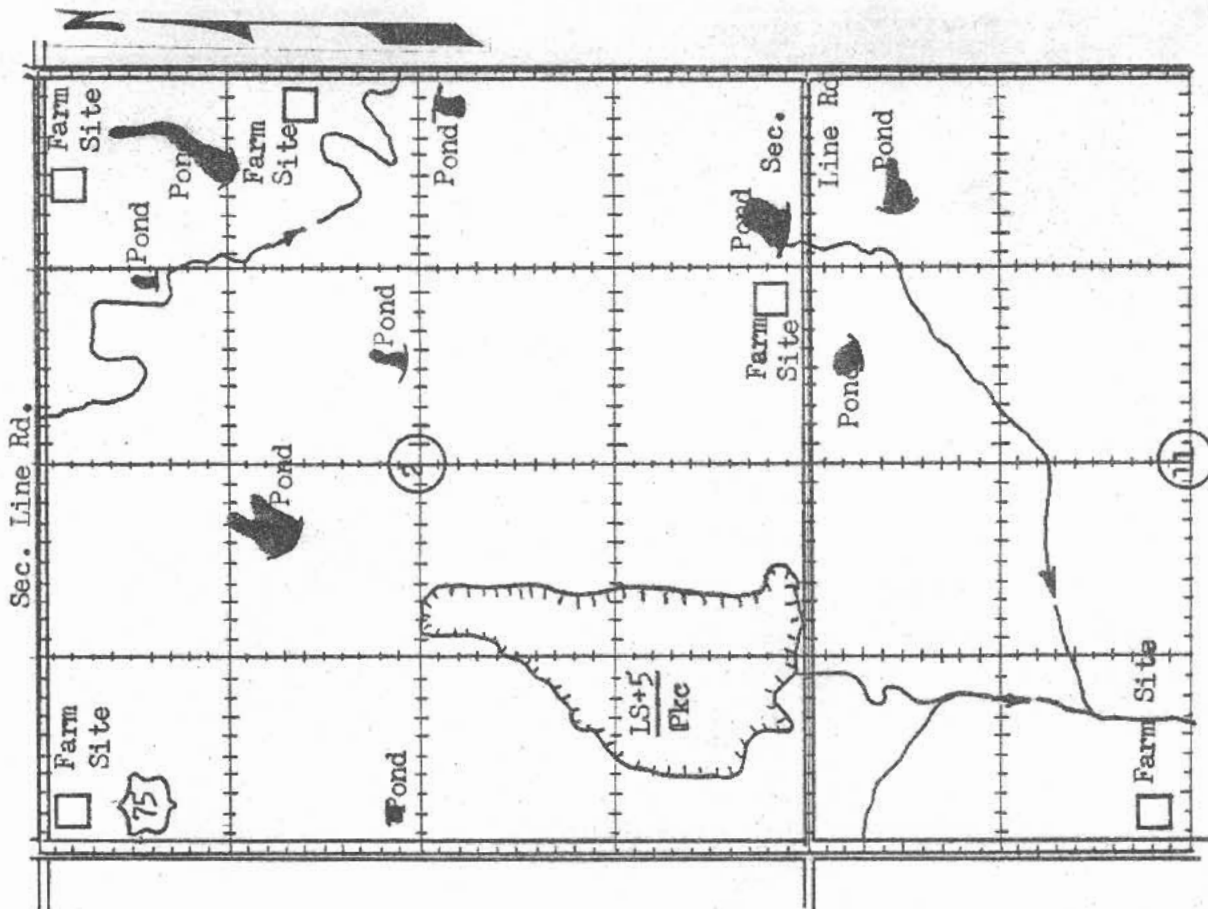
Sp. Gr. (Saturated)	2.64	2.64
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Sp. Gr. (Dry)	2.60	2.60

Los Angeles Abrasion	23.4% (B)	22.1% (B)
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Absorption	1.67%	1.58%
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Soundness	0.98	0.97
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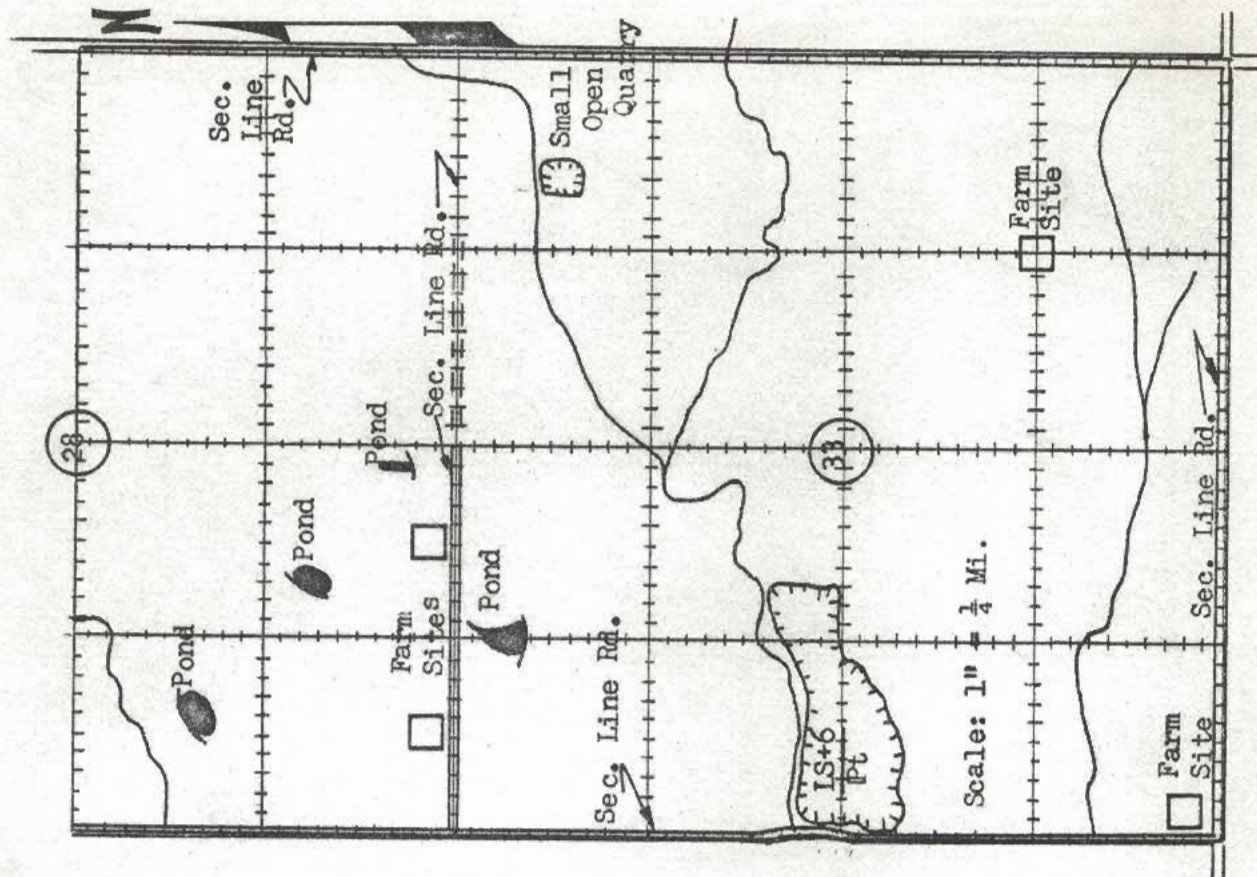
MATERIAL SURVEY REPORT

SITE NO. _____ DATE _____
 MATERIAL Limestone COUNTY Coffey
 LOCATION W 50A SW 1/4, NW 1/4 SEC. 33 TWP. 19S RANGE 14E
 OWNER Golda E. Blue address _____
 name _____
 TENANT _____ address _____
 NATURE OF DEPOSIT Dry ACCESSIBILITY Good
 STATUS OF SITE Open and producing

[illegible]

CORRELATION DATA		GEOLOGICAL AGE	GEOLOGICAL SOURCE
MATERIAL	SIMILAR TO		
Curzon-Hartford Limestone members		Pennsylvanian	SHC Lab. No. 23768 and 21564
			<u>Topeka Limestone Fm</u>

REMARKS:	SHC Lab. No. 23768	21564
Sp. Gr. (Saturated)	2.56	2.56
Sp. Gr. (Dry)	2.47	2.50
Los Angeles Abrasion	28.4% (B)	30.2%
Absorption	3.42%	2.58%
Soundness	0.98	0.98



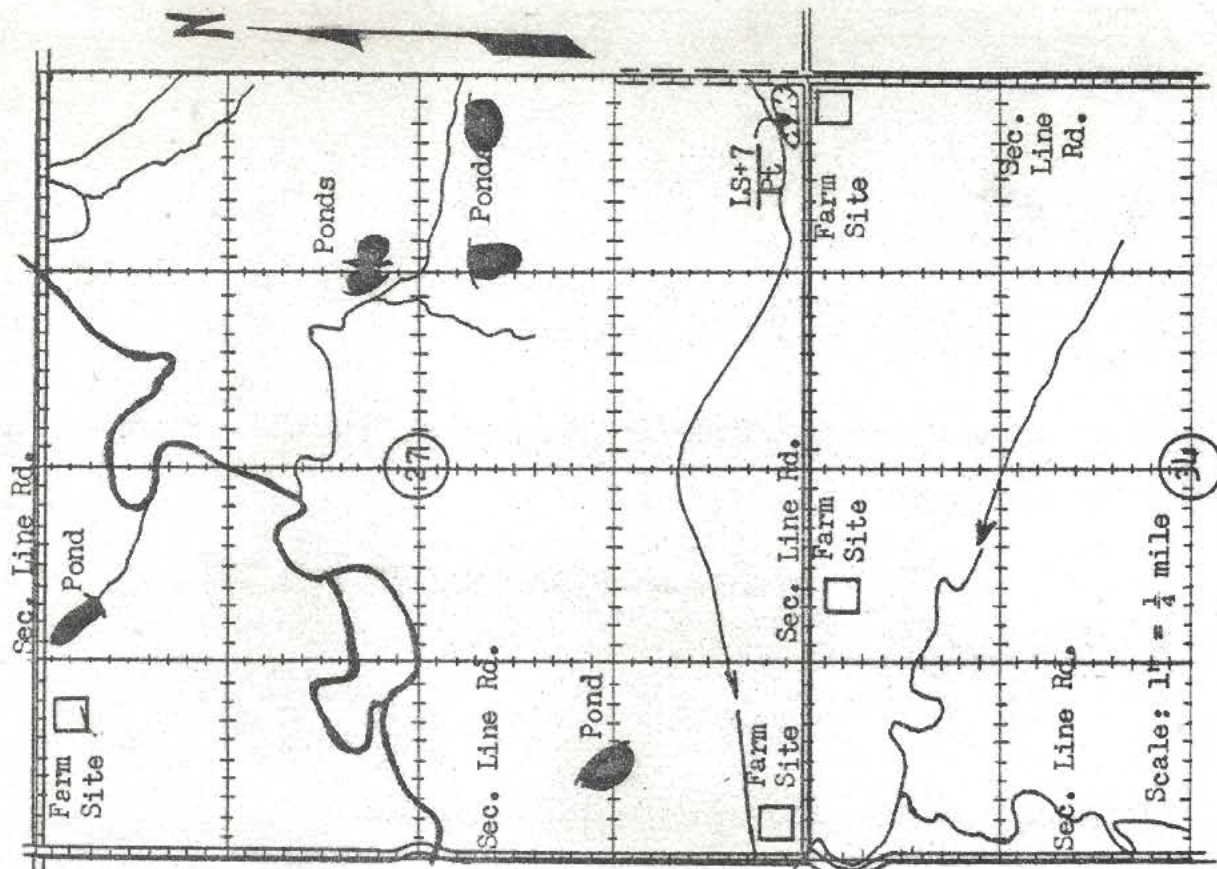
MATERIAL SURVEY REPORT

SITE NO.	PT	DATE	May 1963
MATERIAL	Limestone	COUNTY	Coffey
LOCATION	SE 1/4	TWP.	21S
OWNER	S 1/2 Wm. W. Kimball	RANGE	14E
TENANT	N 1/2 Chas. H. Schiff et al.	address	Bellevue, Washington
NATURE OF DEPOSIT	Dry	address	Rt. 3, Burlington, Ks.
STATUS OF SITE	Open: Sampled	ACCESSIBILITY	Good

[illegible]

CORRELATION DATA		GEOLOGICAL SOURCE
GEOLOGICAL AGE	Pennsylvanian	
MATERIAL SIMILAR TO	SHC Lab. No. 14624	Curzon-Hartford Limestone members Topeka Limestone Fm

REMARKS:	SHC Lab. No. 14624
Sp. Gr. (Saturated)	2.54
Sp. Gr. (Dry)	2.47
Los Angeles Abrasion	29.9% (B)
Absorption	2.57%
Soundness	0.98



SG+8

EXPLORATION DATA

[illegible]

CORRELATION DATA

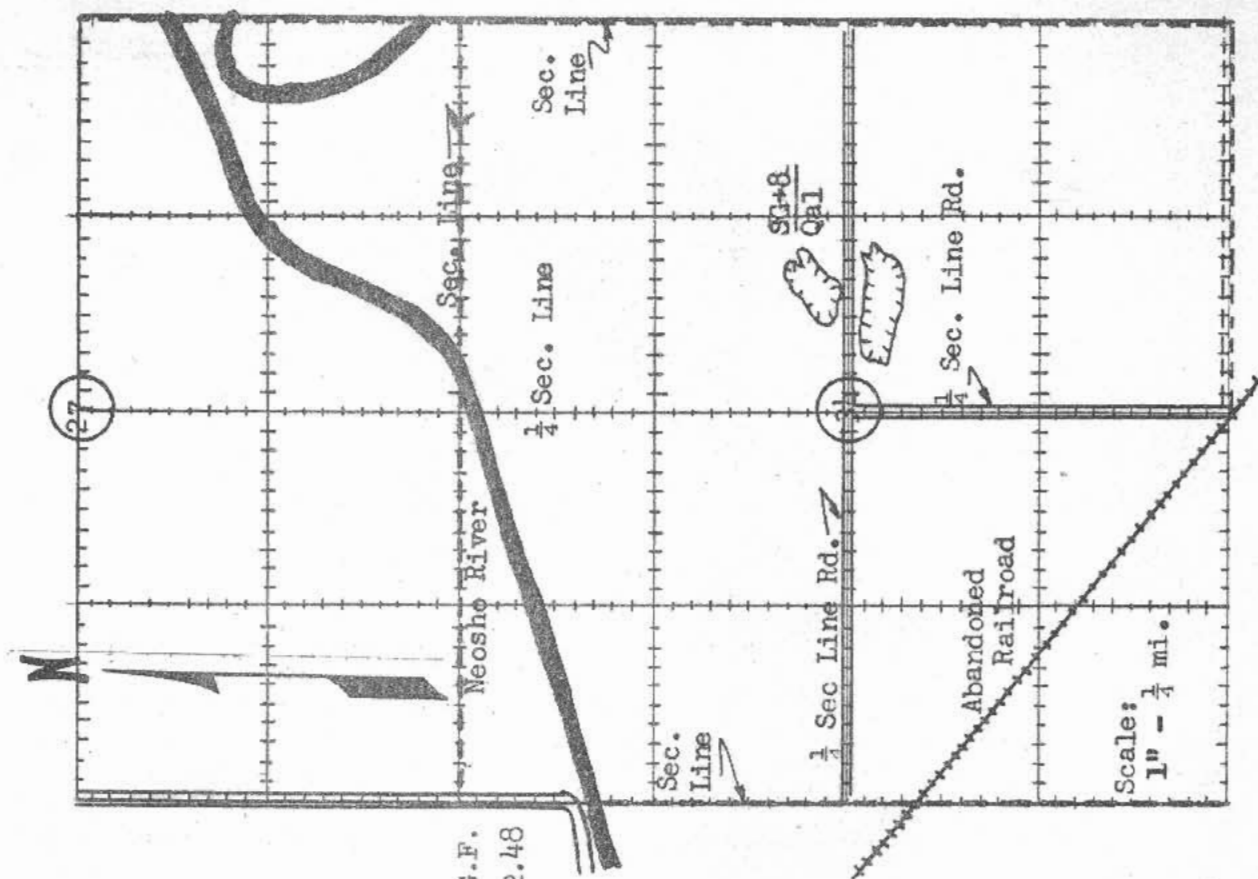
GEOLOGICAL AGE Recent GEOLOGICAL SOURCE Alluvium
MATERIAL SIMILAR TO SHC Lab. No. 25211 (Test results completed on
fine sand)

REMARKS: Wt./Cu. Ft. 104.17 lb.

Absorption	1.10%
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Strength Ratio (1 day) 0.77, (3 day) 0.82

This material is a sand resulting from the natural disintegration of siliceous rocks.



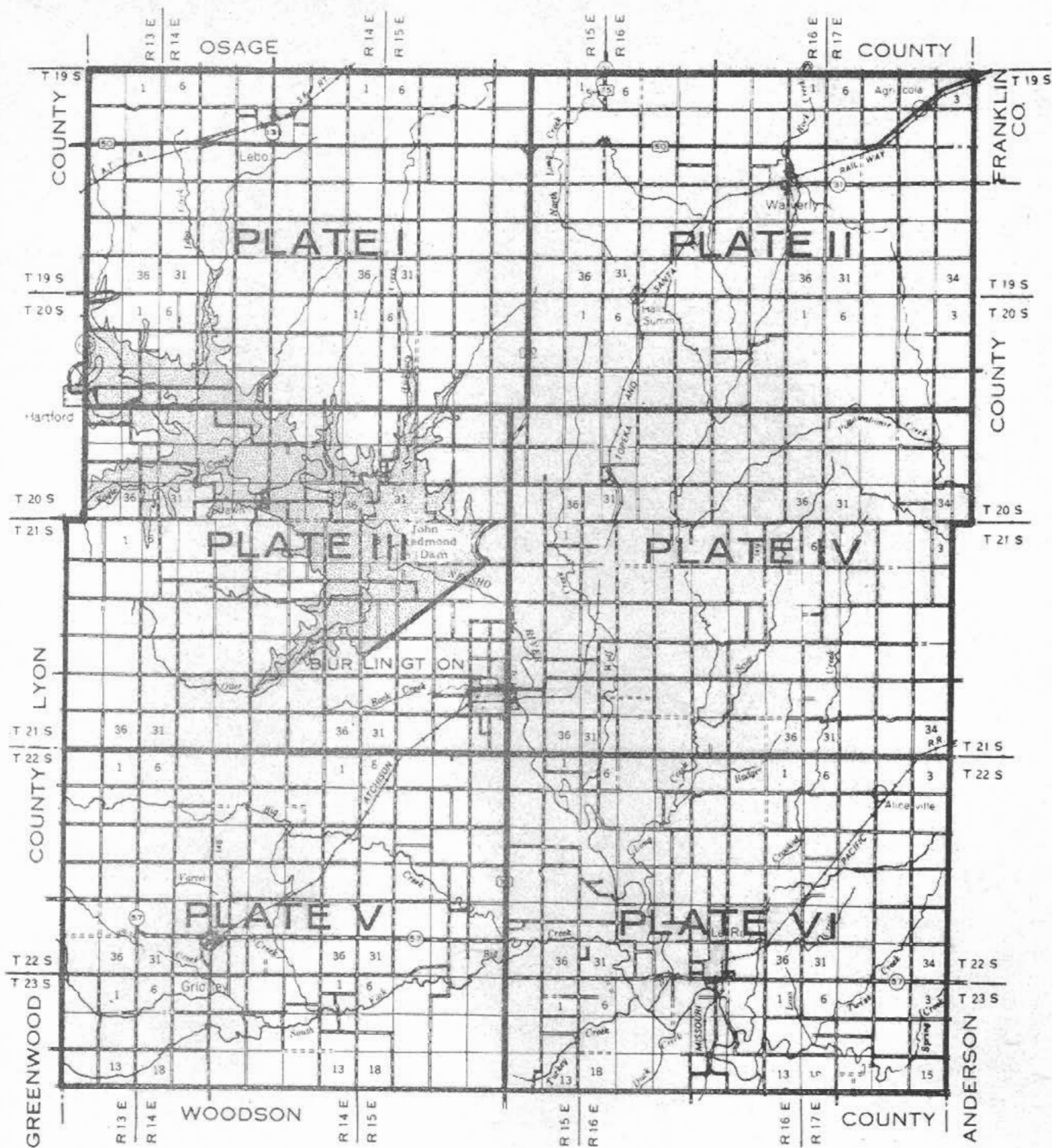
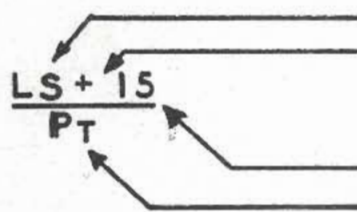


Figure 25. Coffey County Materials Map Index.

COFFEY COUNTY MATERIALS MAP

LEGEND

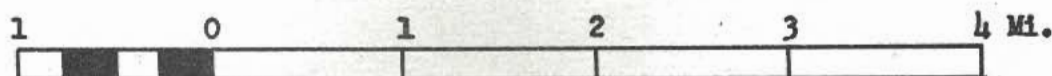
- Open Site; not sampled (See Appendix I)
- ⊕ Prospective Site; not sampled (See Appendix II)
- ◐ Prospective Site; limited boring and sampling (See Appendix III)
- Open Site; sampled (See Appendix IV)
-  Reservoir or Lake
-  Dry Lake, Subject to Flooding



Material Type (Limestone)
 Estimated Quantity
 + indicates more than 20,000 cubic yards
 - indicates less than 20,000 cubic yards
 Site Data Sheet Number
 Geologic Age or Formation

PT	Exposed Buried	Curzon-Hartford Limestone Members, Topeka Limestone Formation
PDE	Exposed Buried	Ervine Creek Limestone Member, Deer Creek Limestone Formation
PDO	Exposed Buried	Ozawie Limestone Member, Deer Creek Limestone Formation
PLL	Exposed Buried	Avoca and Beil Limestone Members, Lecompton Limestone Formation
PKC	Exposed Buried	Clay Creek Limestone Member, Kanvaka Shale Formation
POK	Exposed Buried	Kereford Limestone Member, Oread Limestone Formation
POP	Exposed Buried	Plattsmouth Limestone Member, Oread Limestone Formation
POT	Exposed Buried	Toronto Limestone Member, Oread Limestone Formation

SCALE:



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R 14 E	
R 15 E	

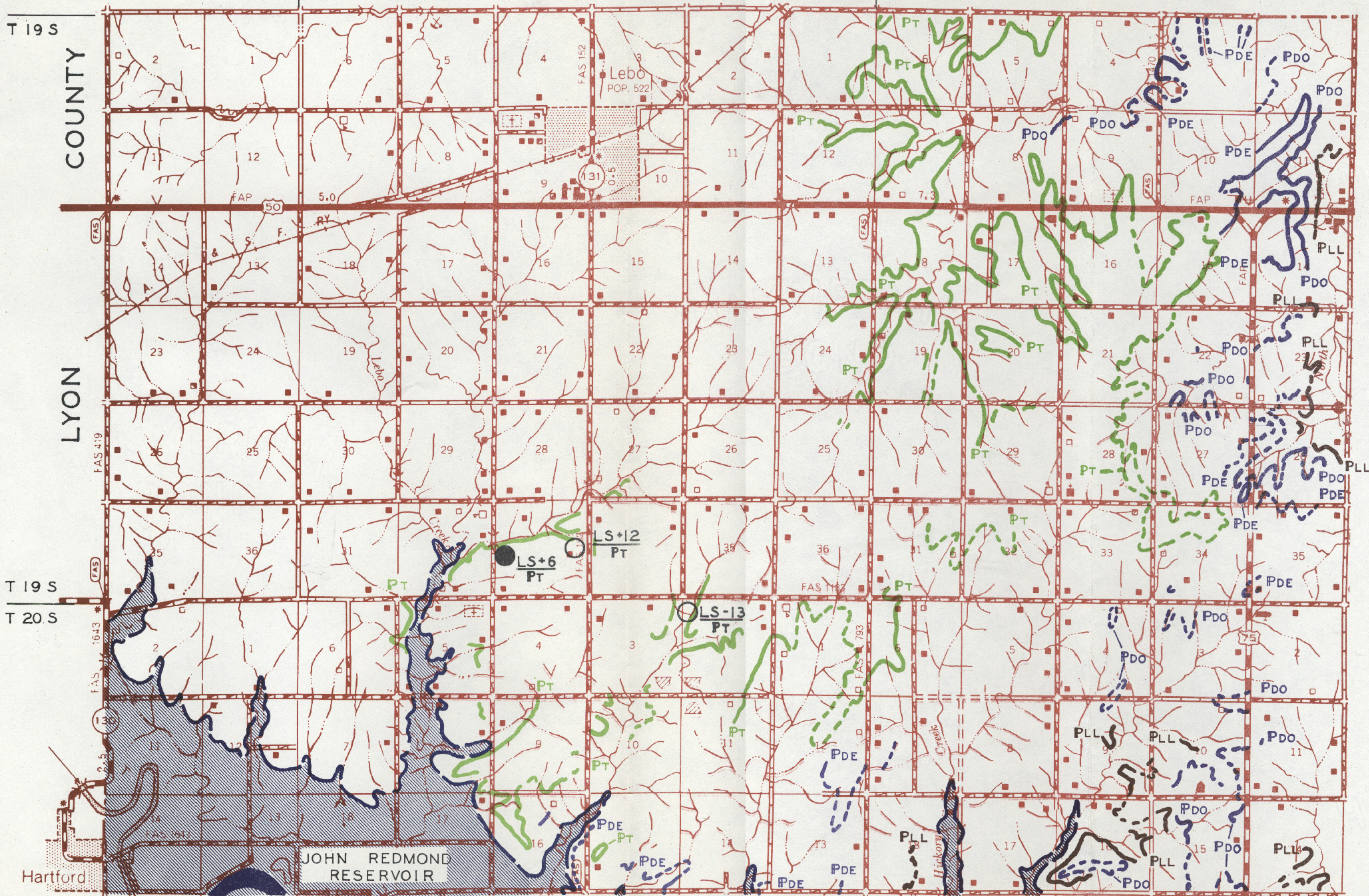
LYON

T 20. S

Hartford

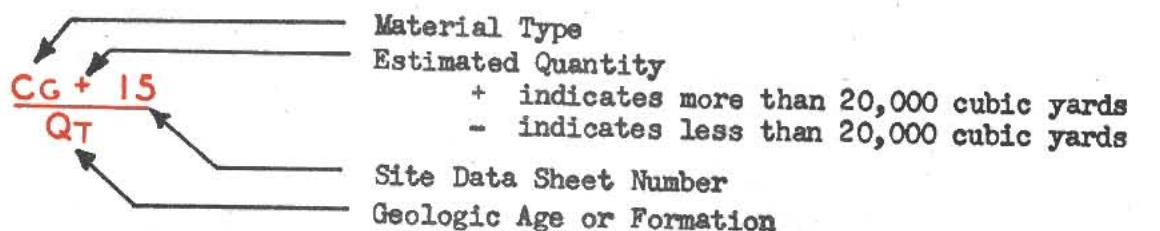
JOHN REDMOND
RESERVOIR

PLATE I (BEDROCK)



COFFEY COUNTY MATERIALS MAP LEGEND

-  Open Site; not sampled (See Appendix I)
-  Prospective Site; not sampled (See Appendix II)
-  Prospective Site; limited boring and sampling (See Appendix III)
-  Open Site; sampled (See Appendix IV)



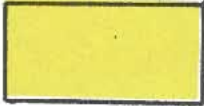
CG - Chert Gravel

SG - Sand & Gravel

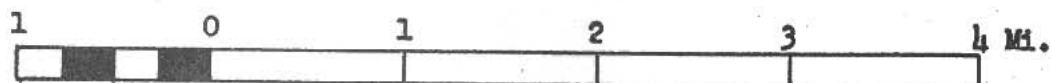
 Reservoir or Lake

 Dry Lake, Subject to Flooding

 QT - Quaternary Terraces

 QAL - Quaternary Alluvium

SCALE:



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BUREAU OF PUBLIC ROADS

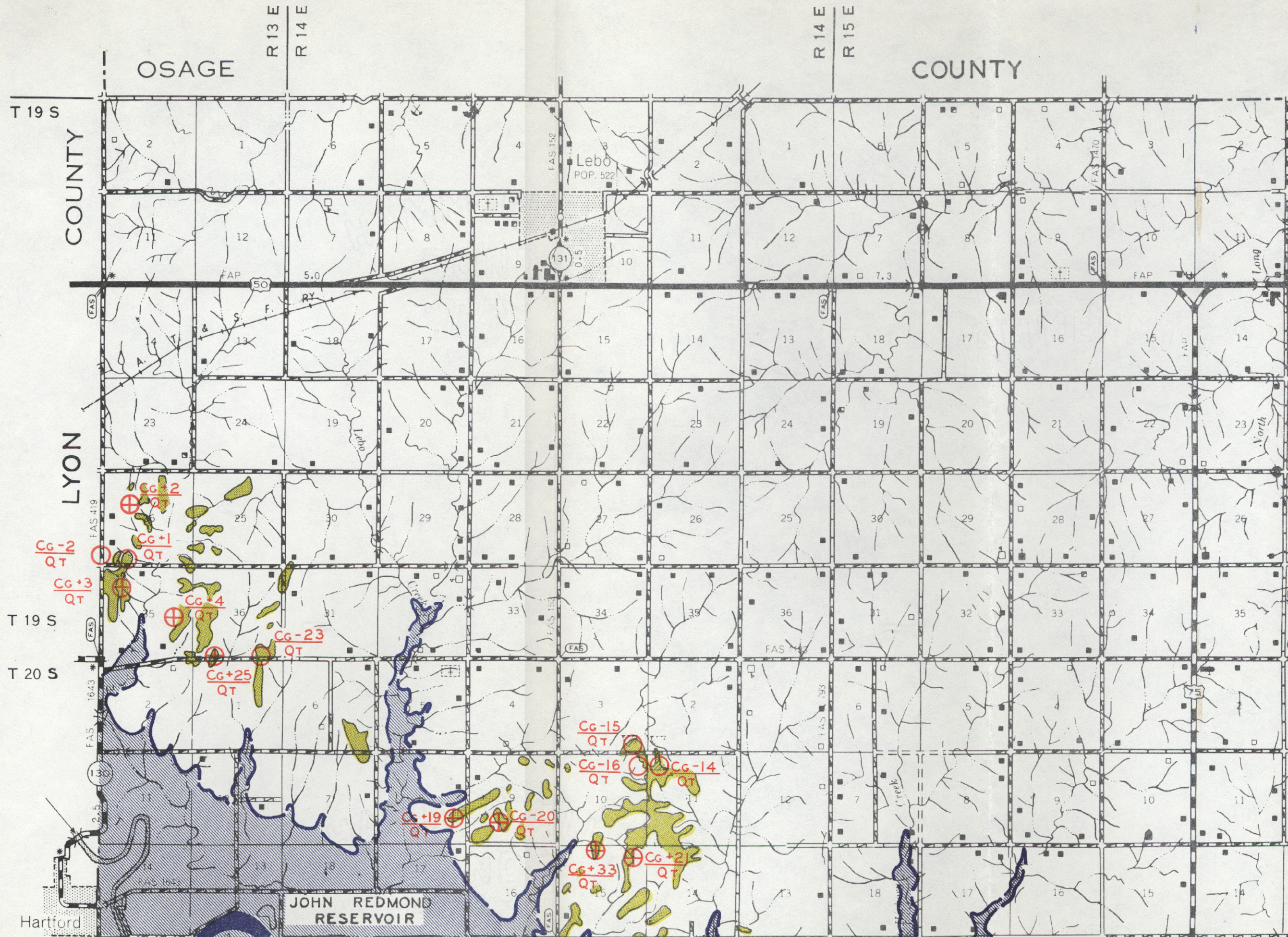
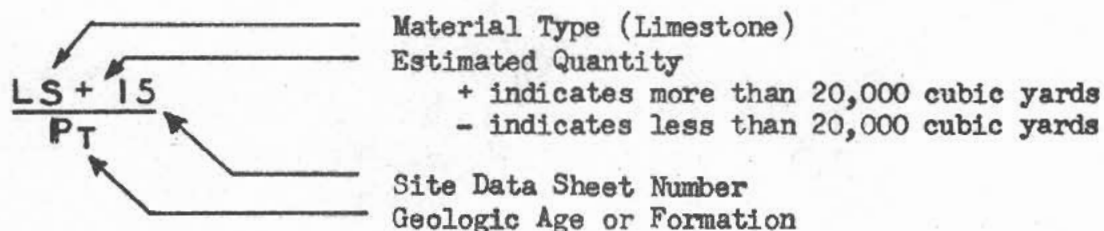


PLATE IA (GRANULAR)

COFFEY COUNTY MATERIALS MAP

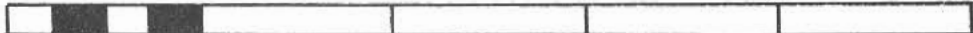
LEGEND

- Open Site; not sampled (See Appendix I)
- ⊕ Prospective Site; not sampled (See Appendix II)
- ◐ Prospective Site; limited boring and sampling (See Appendix III)
- Open Site; sampled (See Appendix IV)
-  Reservoir or Lake
-  Dry Lake, Subject to Flooding



PT	Exposed Buried	Curzon-Hartford Limestone Members, Topeka Limestone Formation
PDE	Exposed Buried	Ervine Creek Limestone Member, Deer Creek Limestone Formation
PDO	Exposed Buried	Ozawkie Limestone Member, Deer Creek Limestone Formation
PLL	Exposed Buried	Avoca and Beil Limestone Members, Lecompton Limestone Formation
PKC	Exposed Buried	Clay Creek Limestone Member, Kanwaka Shale Formation
POK	Exposed Buried	Kereford Limestone Member, Oread Limestone Formation
POP	Exposed Buried	Plattsmouth Limestone Member, Oread Limestone Formation
POT	Exposed Buried	Toronto Limestone Member, Oread Limestone Formation

SCALE: 1 0 1 2 3 4 Mi.



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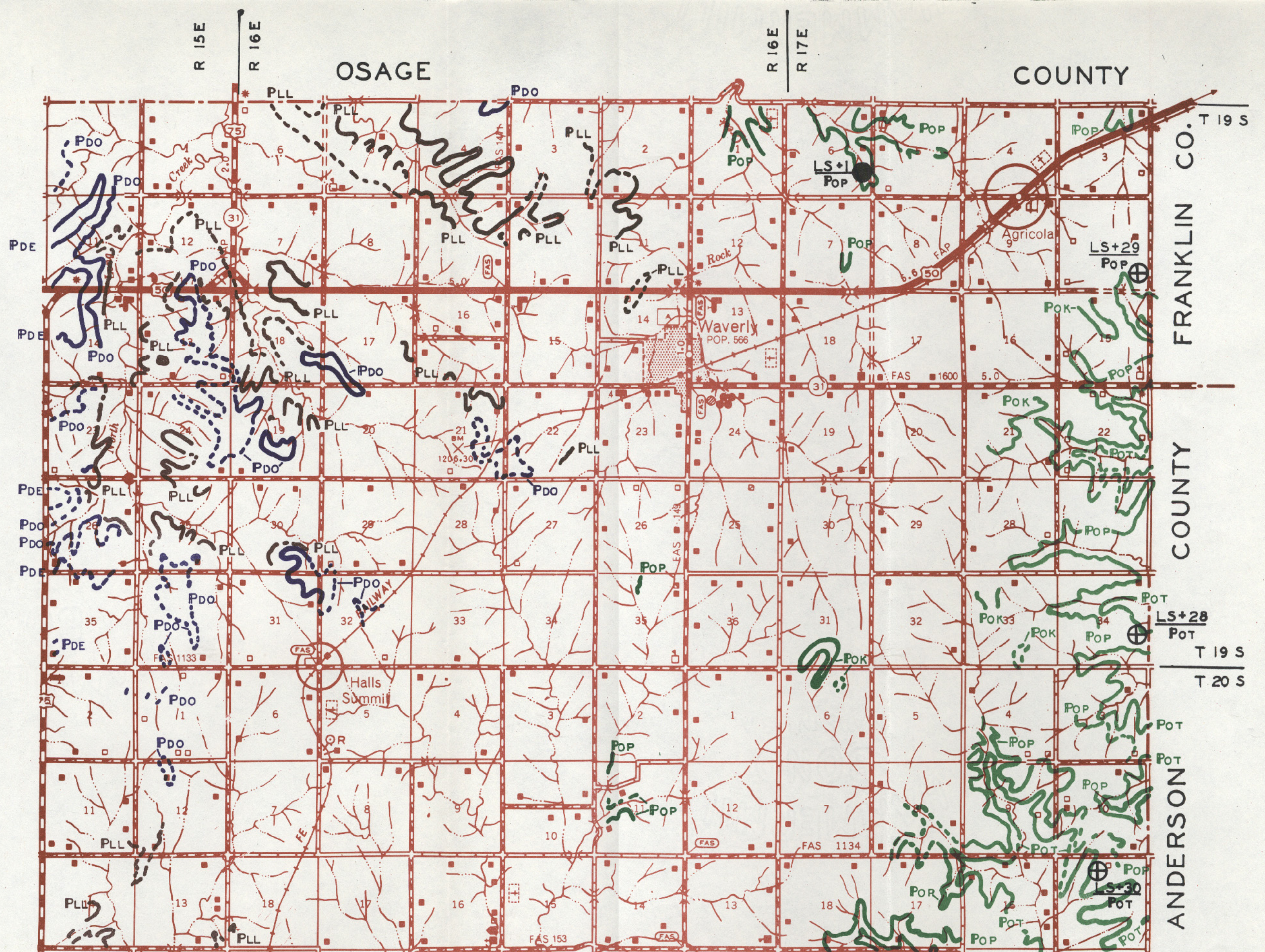


PLATE II (BEDROCK)

COFFEY COUNTY MATERIALS MAP

LEGEND

○ Open Site; not sampled (See Appendix I)

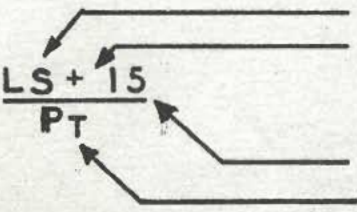
⊕ Prospective Site; not sampled (See Appendix II)

◐ Prospective Site; limited boring and sampling (See Appendix III)

● Open Site; sampled (See Appendix IV)

 Reservoir or Lake

 Dry Lake, Subject to Flooding

 Material Type (Limestone)
Estimated Quantity
+ indicates more than 20,000 cubic yards
- indicates less than 20,000 cubic yards
Site Data Sheet Number
Geologic Age or Formation

PT {  Exposed } Curzon-Hartford Limestone Members, Topeka Limestone Formation
 {  Buried }

PDE {  Exposed } Ervine Creek Limestone Member, Deer Creek Limestone Formation
 {  Buried }

PDO {  Exposed } Ozawie Limestone Member, Deer Creek Limestone Formation
 {  Buried }

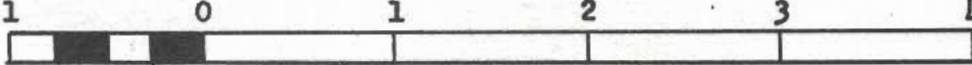
PLL {  Exposed } Avoca and Beil Limestone Members, Lecompton Limestone Formation
 {  Buried }

PKC {  Exposed } Clay Creek Limestone Member, Kanwaka Shale Formation
 {  Buried }

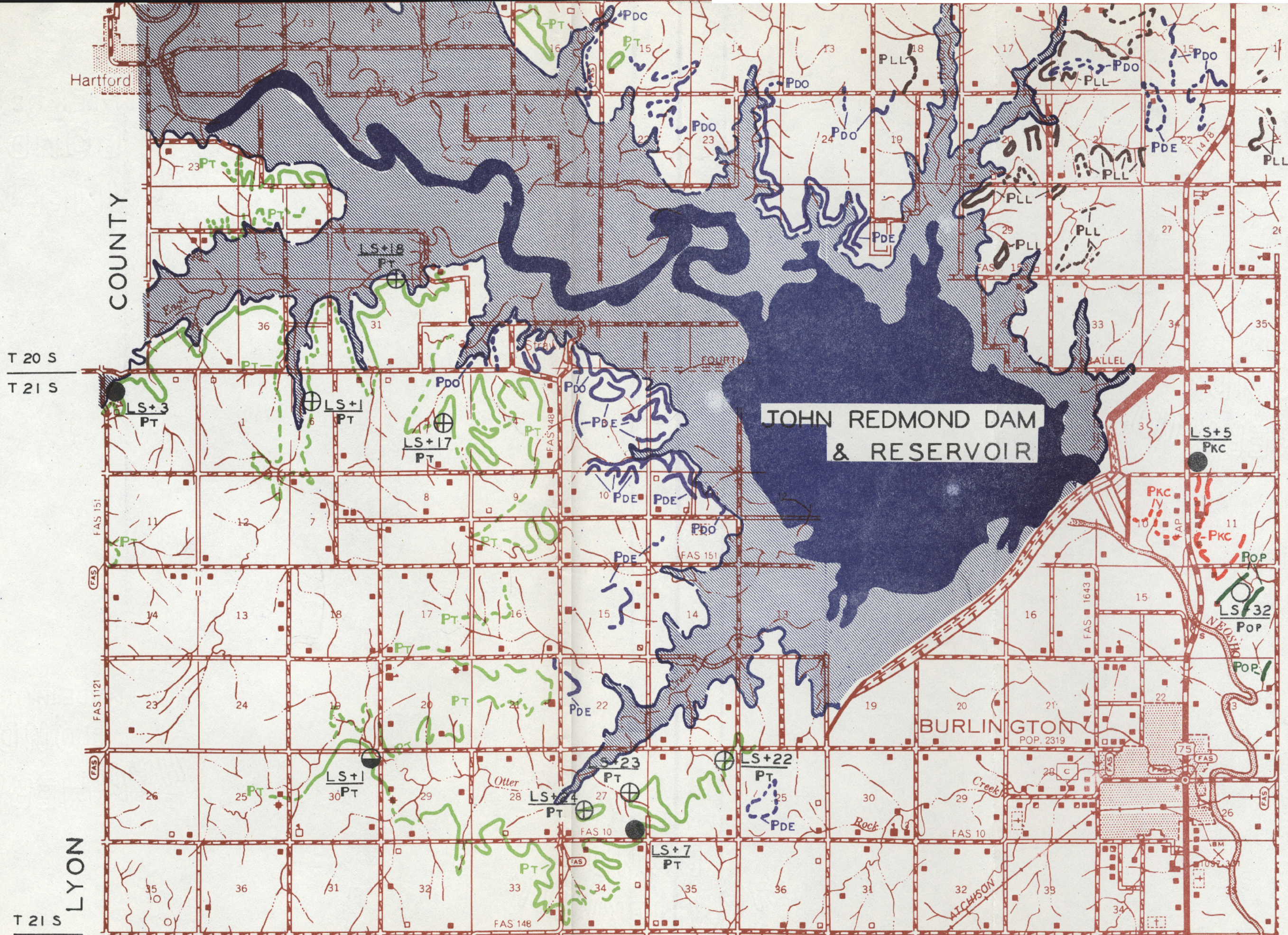
POK {  Exposed } Kereford Limestone Member, Oread Limestone Formation
 {  Buried }

POP {  Exposed } Plattsmouth Limestone Member, Oread Limestone Formation
 {  Buried }

POT {  Exposed } Toronto Limestone Member, Oread Limestone Formation
 {  Buried }

SCALE:  1 0 1 2 3 4 Mi.

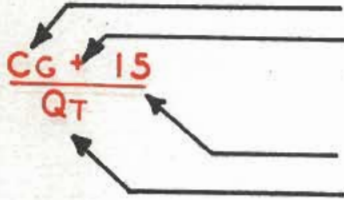
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BUREAU OF PUBLIC ROADS



COFFEY COUNTY MATERIALS MAP

LEGEND

-  Open Site; not sampled (See Appendix I)
-  Prospective Site; not sampled (See Appendix II)
-  Prospective Site; limited boring and sampling (See Appendix III)
-  Open Site; sampled (See Appendix IV)


Material Type
Estimated Quantity
 + indicates more than 20,000 cubic yards
 - indicates less than 20,000 cubic yards
Site Data Sheet Number
Geologic Age or Formation

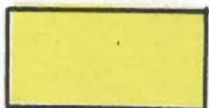
CG - Chert Gravel
SG - Sand & Gravel

 Reservoir or Lake

 Dry Lake, Subject to Flooding

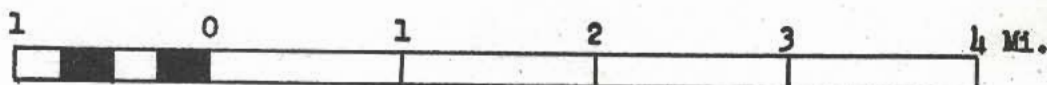


QT - Quaternary Terraces



QAL - Quaternary Alluvium

SCALE:



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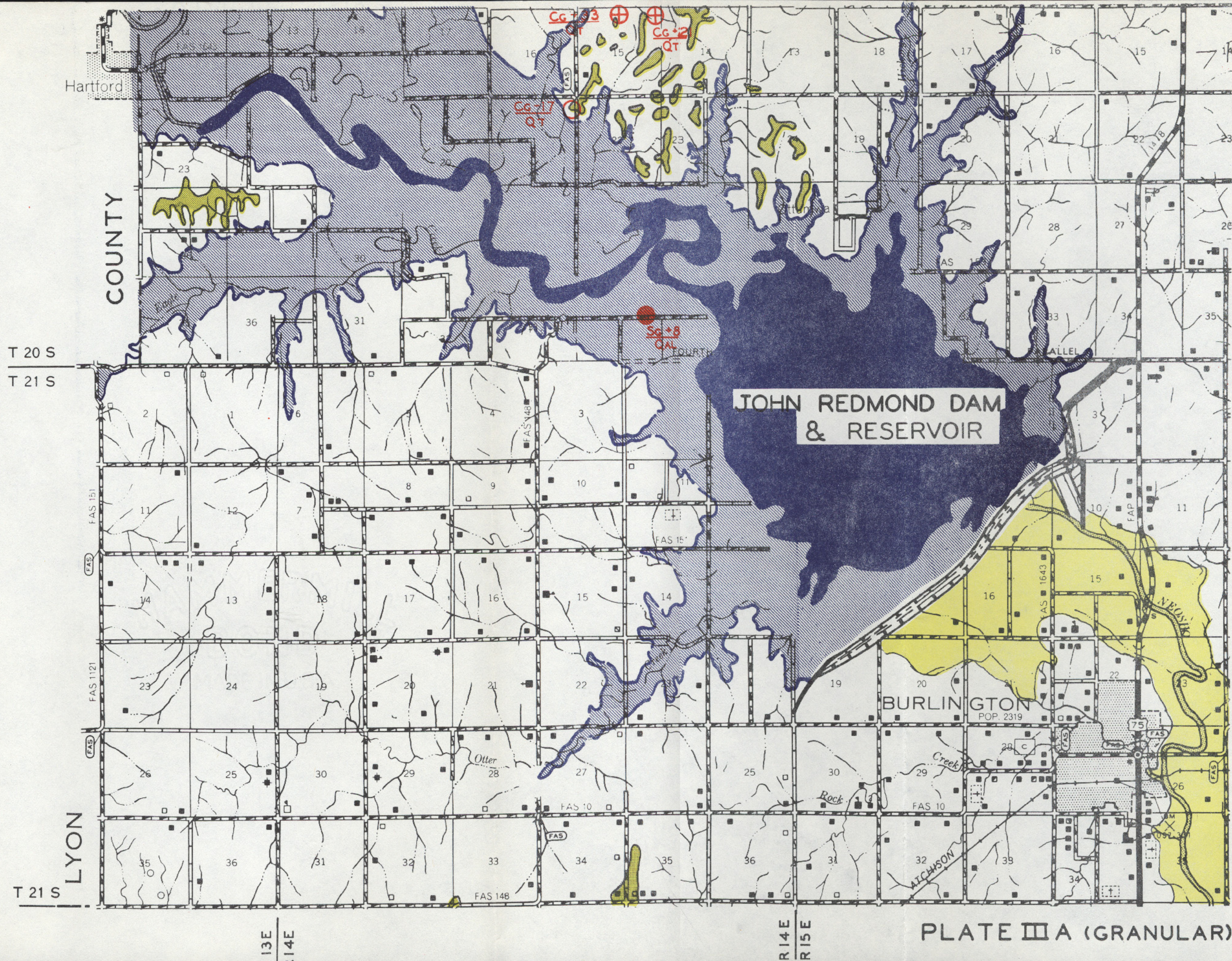
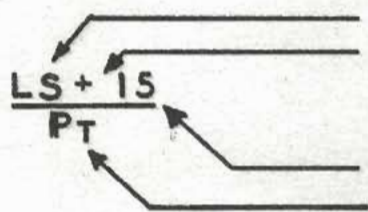


PLATE III A (GRANULAR)

COFFEY COUNTY MATERIALS MAP

LEGEND

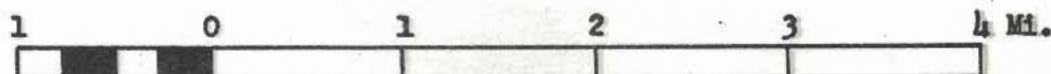
- Open Site; not sampled (See Appendix I)
- ⊕ Prospective Site; not sampled (See Appendix II)
- ◐ Prospective Site; limited boring and sampling (See Appendix III)
- Open Site; sampled (See Appendix IV)
-  Reservoir or Lake
-  Dry Lake, Subject to Flooding



Material Type (Limestone)
 Estimated Quantity
 + indicates more than 20,000 cubic yards
 - indicates less than 20,000 cubic yards
 Site Data Sheet Number
 Geologic Age or Formation

PT	Exposed Buried	Curzon-Hartford Limestone Members, Topeka Limestone Formation
PDE	Exposed Buried	Ervine Creek Limestone Member, Deer Creek Limestone Formation
PDO	Exposed Buried	Ozawkie Limestone Member, Deer Creek Limestone Formation
PLL	Exposed Buried	Avoca and Beil Limestone Members, Lecompton Limestone Formation
PKC	Exposed Buried	Clay Creek Limestone Member, Kanwaka Shale Formation
POK	Exposed Buried	Kereford Limestone Member, Oread Limestone Formation
POP	Exposed Buried	Plattsmouth Limestone Member, Oread Limestone Formation
POT	Exposed Buried	Toronto Limestone Member, Oread Limestone Formation

SCALE:



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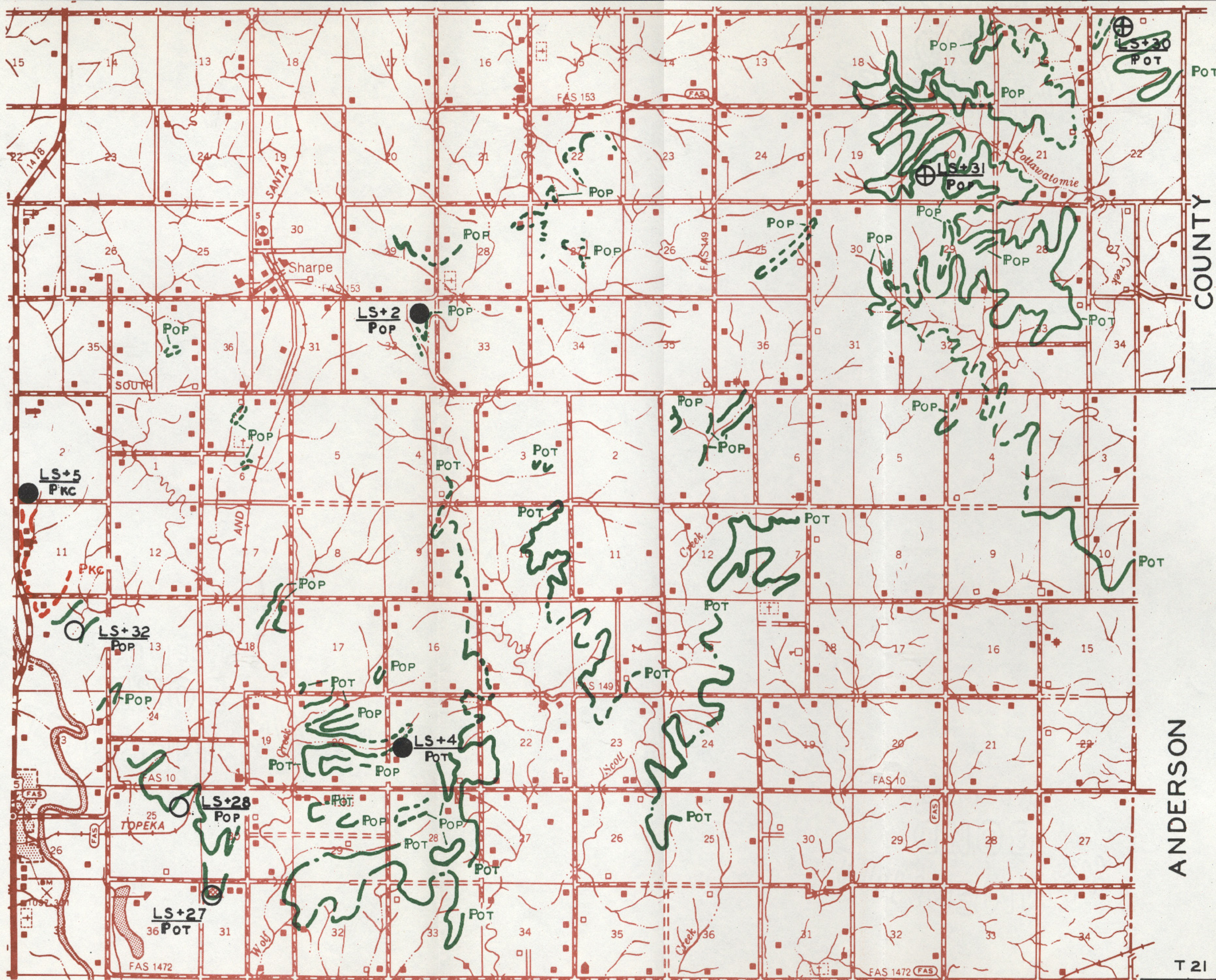
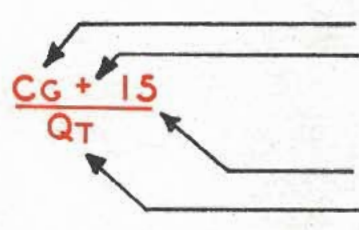


PLATE IV (BEDROCK)

COFFEY COUNTY MATERIALS MAP

LEGEND

-  Open Site; not sampled (See Appendix I)
-  Prospective Site; not sampled (See Appendix II)
-  Prospective Site; limited boring and sampling (See Appendix III)
-  Open Site; sampled (See Appendix IV)



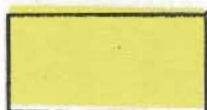
Material Type
 Estimated Quantity
 + indicates more than 20,000 cubic yards
 - indicates less than 20,000 cubic yards
 Site Data Sheet Number
 Geologic Age or Formation

CG - Chert Gravel
 SG - Sand & Gravel

 Reservoir or Lake
 Dry Lake, Subject to Flooding

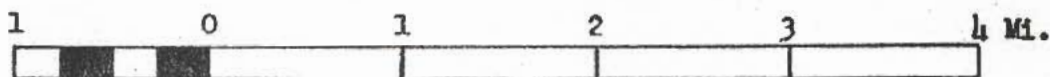


QT - Quaternary Terraces



QAL - Quaternary Alluvium

SCALE:



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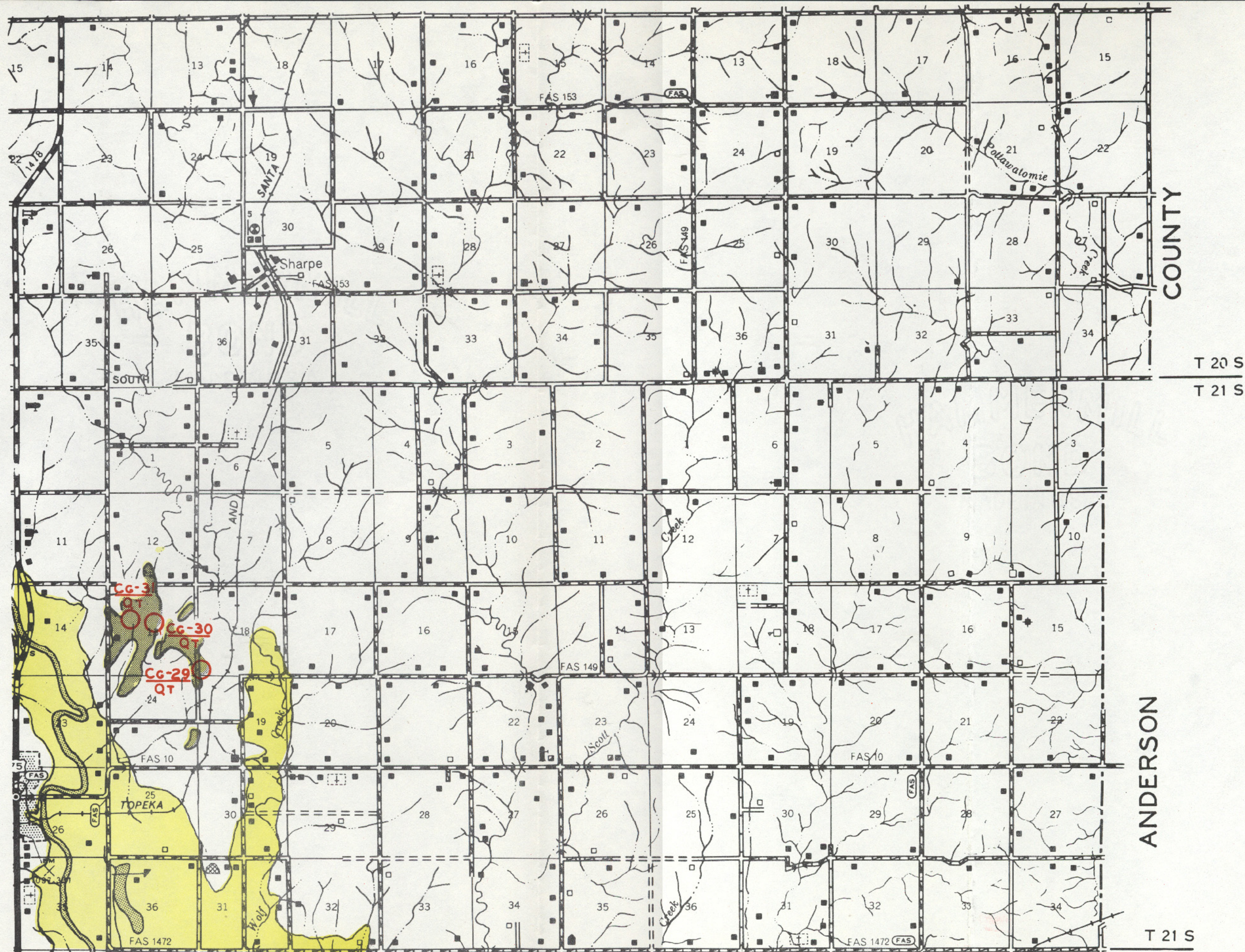
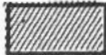
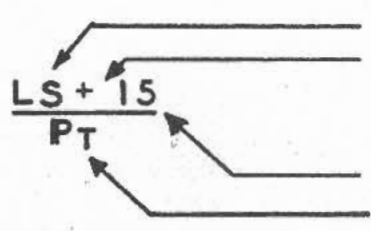


PLATE IV A (GRANULAR)

COFFEY COUNTY MATERIALS MAP

LEGEND

- Open Site; not sampled (See Appendix I)
- ⊕ Prospective Site; not sampled (See Appendix II)
- ◐ Prospective Site; limited boring and sampling (See Appendix III)
- Open Site; sampled (See Appendix IV)
-  Reservoir or Lake
-  Dry Lake, Subject to Flooding



Material Type (Limestone)
 Estimated Quantity
 + indicates more than 20,000 cubic yards
 - indicates less than 20,000 cubic yards
 Site Data Sheet Number
 Geologic Age or Formation

PT	Exposed Buried	Curzon-Hartford Limestone Members, Topeka Limestone Formation
PDE	Exposed Buried	Ervine Creek Limestone Member, Deer Creek Limestone Formation
PDO	Exposed Buried	Ozawkie Limestone Member, Deer Creek Limestone Formation
PLL	Exposed Buried	Avoca and Beil Limestone Members, Lecompton Limestone Formation
PKC	Exposed Buried	Clay Creek Limestone Member, Kanwaka Shale Formation
POK	Exposed Buried	Kereford Limestone Member, Oread Limestone Formation
POP	Exposed Buried	Plattsmouth Limestone Member, Oread Limestone Formation
POT	Exposed Buried	Toronto Limestone Member, Oread Limestone Formation

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T 21 S
T 22 S

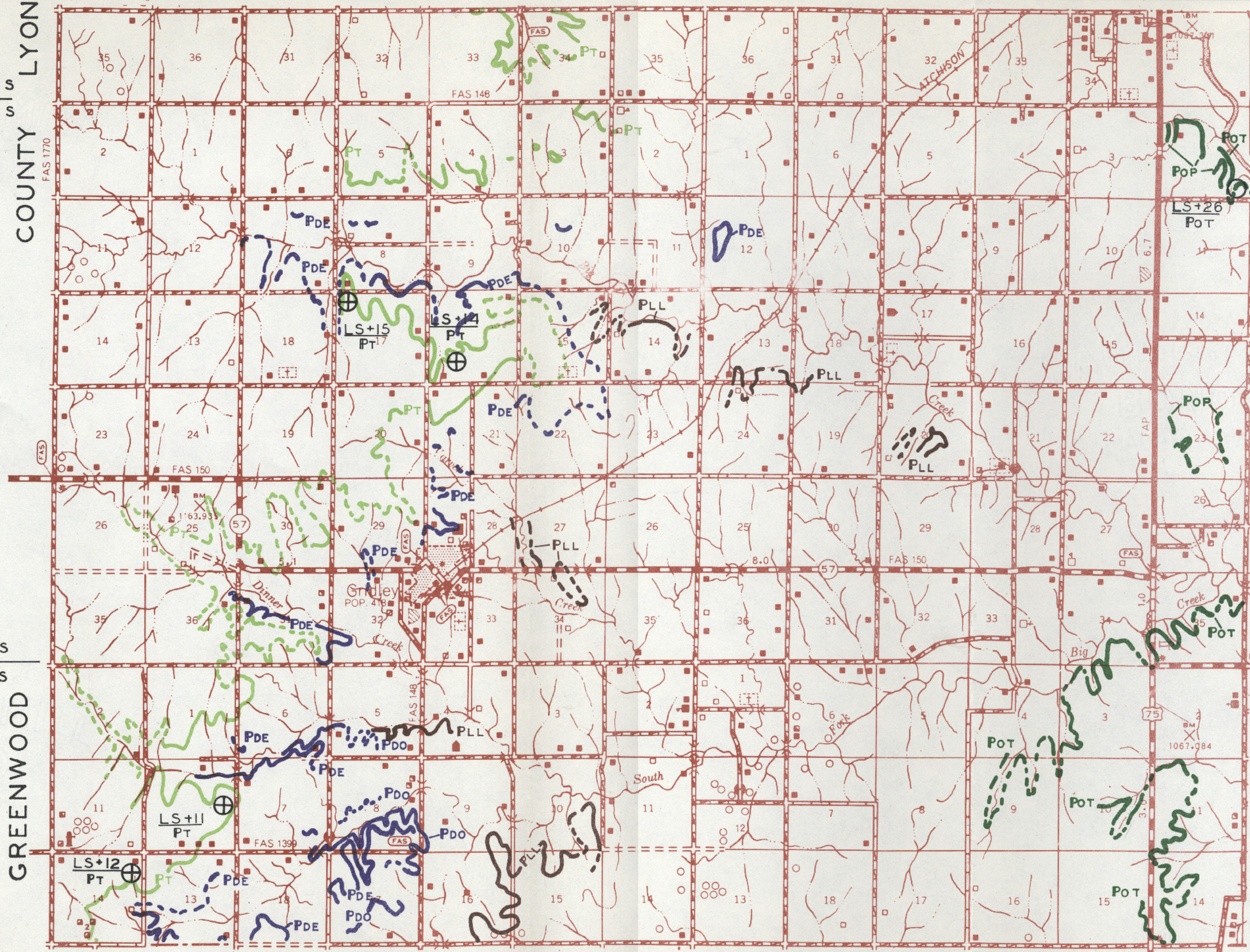
COUNTY LYON

T 22 S
T 23 S

GREENWOOD

WOODSON COUNTY

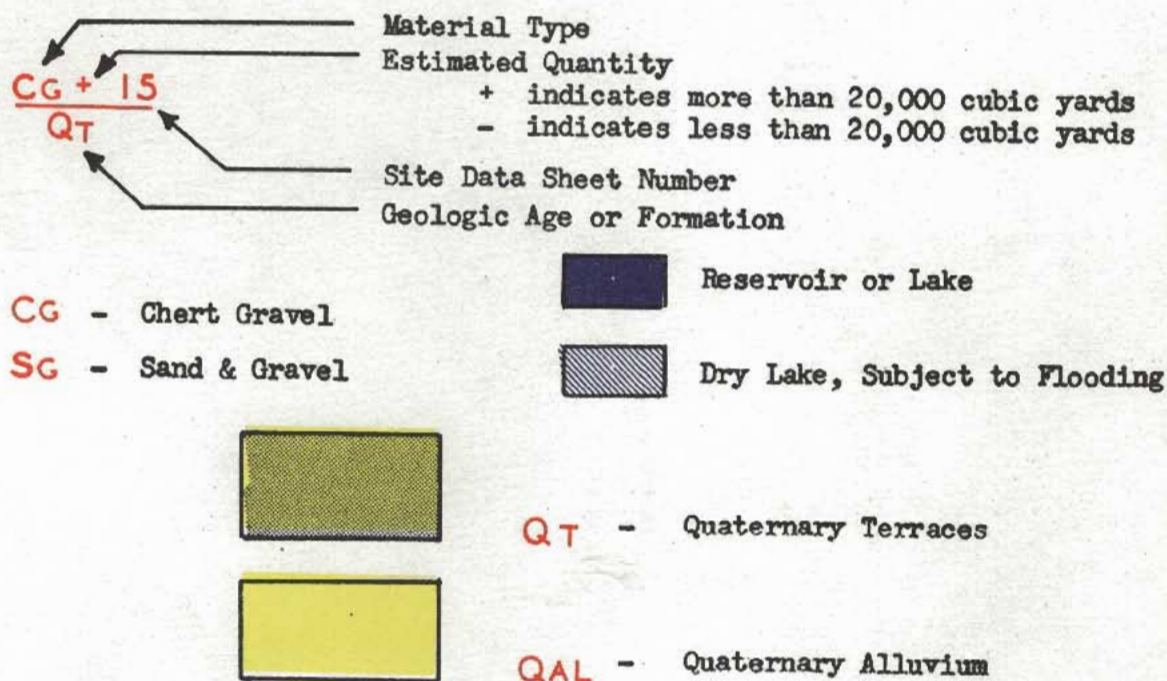
PLATE V (BEDROCK)



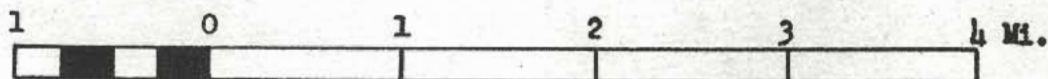
COFFEY COUNTY MATERIALS MAP

LEGEND

- Open Site; not sampled (See Appendix I)
- ⊕ Prospective Site; not sampled (See Appendix II)
- ◐ Prospective Site; limited boring and sampling (See Appendix III)
- Open Site; sampled (See Appendix IV)



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COFFEY COUNTY MATERIALS MAP

LEGEND

○ Open Site; not sampled (See Appendix I)

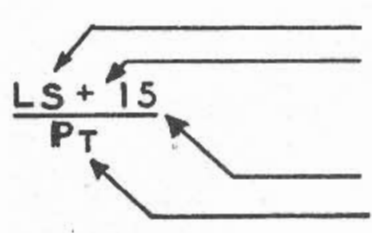
⊕ Prospective Site; not sampled (See Appendix II)

◐ Prospective Site; limited boring and sampling (See Appendix III)

● Open Site; sampled (See Appendix IV)

 Reservoir or Lake

 Dry Lake, Subject to Flooding


 Material Type (Limestone)
 Estimated Quantity
 + indicates more than 20,000 cubic yards
 - indicates less than 20,000 cubic yards
 Site Data Sheet Number
 Geologic Age or Formation

PT	— Exposed --- Buried	Curzon-Hartford Limestone Members, Topeka Limestone Formation
PDE	— Exposed --- Buried	Ervine Creek Limestone Member, Deer Creek Limestone Formation
PDO	— Exposed --- Buried	Ozawkie Limestone Member, Deer Creek Limestone Formation
PLL	— Exposed --- Buried	Avoca and Beil Limestone Members, Lecompton Limestone Formation
PKC	— Exposed --- Buried	Clay Creek Limestone Member, Kanwaka Shale Formation
POK	— Exposed --- Buried	Kereford Limestone Member, Oread Limestone Formation
POP	— Exposed --- Buried	Plattsmouth Limestone Member, Oread Limestone Formation
POT	— Exposed --- Buried	Toronto Limestone Member, Oread Limestone Formation

SCALE:

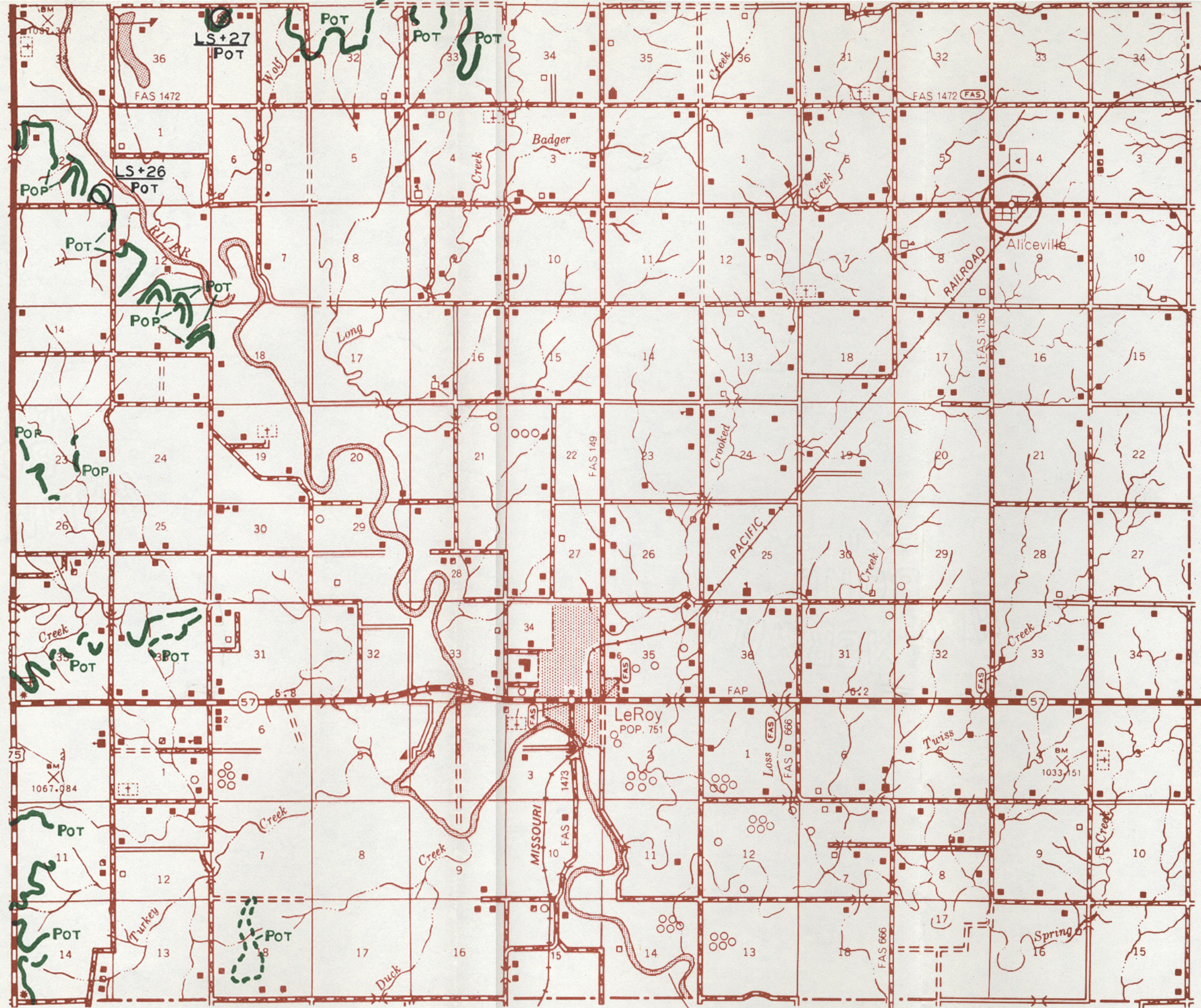


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T 21 S
T 22 S

T 22 S
T 23 S

COUNTY

ANDERSON

WOODSON COUNTY

PLATE VI (BEDROCK)

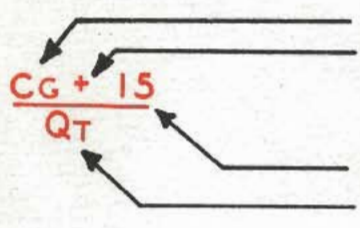
R15E
R16E

R16E
R17E

COFFEY COUNTY MATERIALS MAP

LEGEND

- Open Site; not sampled (See Appendix I)
- ⊕ Prospective Site; not sampled (See Appendix II)
- ◐ Prospective Site; limited boring and sampling (See Appendix III)
- Open Site; sampled (See Appendix IV)


 Material Type
 Estimated Quantity
 + indicates more than 20,000 cubic yards
 - indicates less than 20,000 cubic yards
 Site Data Sheet Number
 Geologic Age or Formation

CG - Chert Gravel
 SG - Sand & Gravel



Reservoir or Lake



Dry Lake, Subject to Flooding

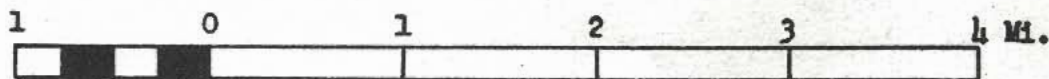


QT - Quaternary Terraces



QAL - Quaternary Alluvium

SCALE:



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