A. A summary of sand and gravel deosits

B. Memorandum ReportL East of Richland City

C. Geologic Map

7-7-49

Date

Sand and Gravel Deposits of Indiana

SUMMARY REPORT OF SPENCER COUNTY

There is one active dredging operation and one active pit operation in the county. There is one inactive dredging operation.

The Ohio River contains bars that are good sources of both sand and gravel. However, these are being depleted rapidly. There are no known terrace deposits along the river.

In the south-central part of the county there are wind blown deposits of sand and clayey sand. These deposits constitute ridges that trend in a northeast-southwest direction.

Some of the small streams entering the Ohio River have thin, lensing terrace deposits buried under the alluvium.

Respectfully submitted,

Harry W. Kugler

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Geologist
June 18, 1949

Sand and Gravel Deposits of Indiana

SAMPLES COLLECTED IN SPENCER COUNTY

K-49-1a Maintenance gravel, from stockpile.

K-49-1b Grit or Pea gravel, from stockpile.

K-49-1c #17 sand, from stockpile.

K-49-1d Mortar sand, from stockpile.

The above samples were collected from the Bedford-Nugent Co., Rockport, Indiana.

K-49-2 A typical sample of clayey sand, from stockpile near drying shed. Hougland and Hardy, SW¼ SW¼ Sec. 14, T 7 S, R7 W.

K-49-3 Clayey sand, from pit of Hougland and Hardy. NE¼ NE¼ Sec. 21, T 7 S, R 7 W.

K-49-4 Clayey, ferruginous sand, from hillside pit; E. A. Wilkinson farm, NW¼ SW¼ Sec. 15, T 7 S, R7 W.

74-B

MEMORANDUM REPORT

Location: East of Richland City. Spencer County (see enclosed map).

Purpose: To locate gravel bearing strata of Cary-Tazewell age. Near mouth of Lake Drain Pleistocene channel.

Procedure: Twenty-four temperature probe readings (Carr-Blakley probe) were taken at approximately one mile intervals over the area (see enclosed map). Auger holes were drilled @ twelve of the temperature probe sites in order to correlate lithology with temperature readings.

Results: Vertical variation in lithologies were generally quite consistant from hole to hole. The following is a generalized composite section

0-15' Red brown clayey silt, lower few feet usually unoxidized.

15-25' Brown to gray fine to medium sand, some granules, occasional blue, sticky clay to slightly silty clay within this zone.

Below 25' Coarse sand with varying amounts of fine gravel. Usually coal particles are present in abundance.

For further details consult the enclosed drilling logs. Two holes were drilled to a T.D. of 58' and one hole to a depth of 50'. Coarser sediments were not encountered in any of these deep tests.

AUGER HOLE LOGS - RICHLAND CITY AREA

Hole # 1

0-13'	Brown, oxidized silty clay - water at 7'
13-28'	Gray, unoxidized silty fine sand
28-33'	Medium to coarse sand, no gravel

Hole #2

0-8'	Reddish brown, oxidized clayey silt
8-13'	Gray clayey silt (wet)
13-18'	Gray silty fine sand
18-33'	Medium to coarse sand, many coal fragments, some pea gravel sized fragments, a few fragments inch sized.

Hole # 3

0-8'	Reddish brown clayey silt
8-13'	Brown fine wet sand
13-28'	Gray medium to coarse sand, some granules, many coal chips
28-38'	Medium to coarse sand, fine gravel, some particles an inch or larger, coal fragments are abundant.

Hole # 4

0-18'	Brown & gray clayey silt
18-28'	Blue & gray silty clay and clay - poor sample recovery
28-38'	As above, hard layers (gravel?) at 28', 37' no recovery

Hole # 5

0-8'	Reddish brown oxidized silty clay - becoming sandy at base
8-28'	Gray fine to medium sand
28-38'	Medium to coarse sand, some granules, abundant coal fragments
38-48'	Coarse sand & fine gravel

Hole # 6

0-13'	Reddish brown oxidized clayey silt becoming sandy at base
13-18'	Brown fine sand with abundant coal particles
18-33'	Medium to coarse sand, some granules abundant coal particles

Hole # 7

0-8'	Peat & clay
8-23'	Blue gray very sticky clay

Hole # 8

0-8'	Reddish brown clayey silt
8-18'	Blue silty clay

18-28'	Gray fine to medium sand
28-38'	Medium to coarse sand containing a few granules, some coal fragments
38-58'	Coarse sand & fine gravel, abundant coal particles

Hole # 9

0-3'	Brown clayey silt
3-8'	Blue silty clay
8-28'	Gray fine to medium sand

Hole # 11

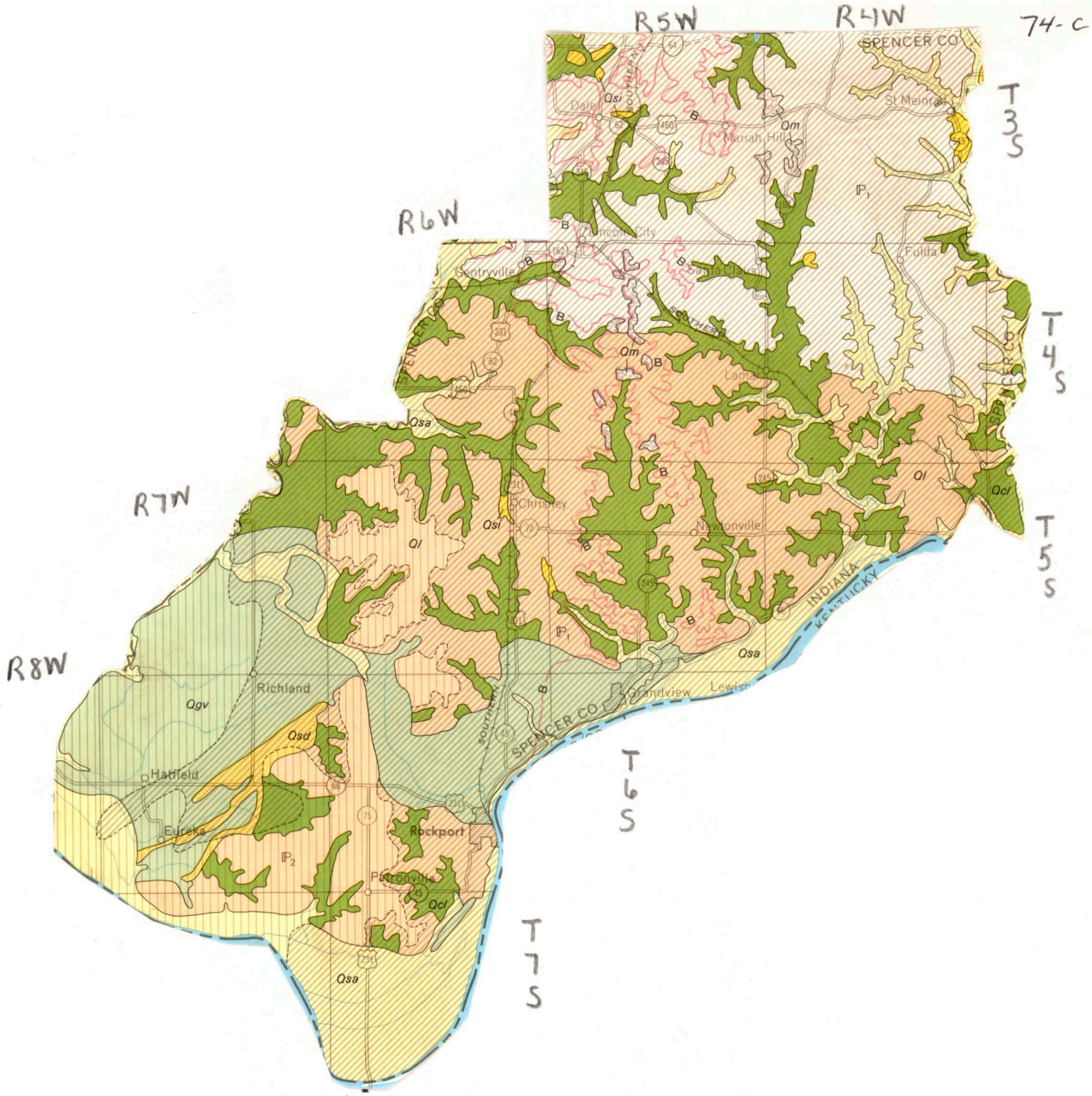
0-3'	Brown oxidized clayey silt
3-18'	Gray to blue clayey silt
18-28'	Gray medium to coarse sand abundant coal particles

Hole A

0-18'	Brown oxidized clayey silt
18-26'	Unoxidized blue clay & silt
26'	Bedrock

Hole B

0-13'	Reddish brown oxidized clayey silt
13-33'	Brown fine to medium muddy sand
33-43'	As above with some granules
43-58'	Coarse-sand & fine gravel abundant coal particles



Scale 1:250,000

5 0 5 10 15 20 Statute Miles

5 0 5 10 15 20 25 30 Kilometers

5 0 5 10 Nautical Miles