

77.

SULLIVAN COUNTY

- A. A summary of sand and gravel deposits
- B. Memorandum Report: County Gravel Pit
- C. Memorandum Report: Merom Gravel Company
- D. Geologic Map
- E. Memorandum Report: Abram & Hawkins Excavating
- F. Memorandum Report: S. & G. Excavating
- G. West Carlisle Gravel Co. , Memorandum Report
- H. Sullivan County Highway Dept. pit, Memorandum Report

Sand and Gravel Deposits of Indiana

SUMMARY REPORT OF SULLIVAN COUNTY

Date of field examination: A reconnaissance survey of the county was made on July 25 and 26, 1949.

Activity: ~~There are~~ 4 active operations and 14 inactive or abandoned operations [↑] ~~in~~ the county. ^{contains}

Geology: ~~There are~~ two geologic sources of sand and gravel ^{are present} in the county. They are the Maumee Terrace and the material under the present floodplain of the Wabash River. Both of these are of Pleistocene age. They are referred [↑] as the second and first bottoms respectively by the local people.

In the northwestern part of the county, the Maumee Terrace is well developed. From the county line on the north to a little below the town of Riverview, the terrace is almost continuous. Along the front of the terrace are many abandoned pits. ^{material from} The ~~general trend~~ ^{most} of these pits ^{has} is a high sand ^{gravel} ratio. There are no operations in the flood-
^{contains} plain in this area.

✓ South of Riverview ~~there are no~~ ^{are not present} terrace deposits. About three miles south of the town, ⁱⁿ the terrace reappears (Sec. 14, T. 8 N; R. 11 W) northwest of Turman Creek and is prominent as a topographic feature.

Along Turman Creek are remnants of the Shelbyville Terrace also. As the Maumee Terrace broadens to the southward from Turman Creek, it becomes less pronounced and in the southern part of the county it blends with the floodplain. In some places remnants of the Maumee are present in the floodplain, as ^{shown by} ~~seen in~~ Fidler's ^{(1948,} ~~plate 1.)~~ ^{plate 1.)}

The sand and gravels under the floodplain of the Wabash River are the main source for operations in the southern part of the county.

Reserves: The reserves of the county are located in the unexploited ^aares of the Maumee Terrace and the floodplain of the Wabash River.

Under the alluvium of the floodplain, the quality of the gravel as well as the quantity will vary as ^{shown by} ~~is seen in~~ some of the drill records in Fidler's report.

Bibliography: Fidler, M. M. (1948), Physiography of the Lower Wabash Valley, Indiana Dept. Conservation, Div. Geol. Pub., Bull. no. 2.

Scovell, J. T. (1906), The Roads and Road Materials of a Portion of Western Indiana, Indiana Dept. Geol. and Nat. Res., 30th Ann. Rept., pp. 646-648.

Birds, Carlisle, Sullivan, Merom, Fairbanks, Hutton, Shelburn, Hymera, Dugger, and Bucktown Quadrangles.

Respectfully submitted,

Harry W. Kugler
Harry W. Kugler,
Geologist
August 15, 1949

77-0
July 25, 1950

MEMORANDUM REPORT BY ROBERT E. SARGENT

COUNTY GRAVEL PIT, SULLIVAN COUNTY

Date of field examination -- July 20, 1950

Location -- The "Monk Pit" is located $4\frac{1}{2}$ miles south of Riverview, in Sullivan County, in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T.8N., R.11W..

Ownership -- The pit is owned and operated by Sullivan County. Sullivan County owns the land on which the pit is located.

Information for this report was furnished by county employees working in the pit.

Geology -- The pit is located in a Maumee erosional terrace relict (See Fidler, 1948, Pl. 1). The gravel is quite well stratified, but generally poorly sorted. The deposit shows some cross bedding. There is a wide range of rock sizes in the deposit.

The overburden of the pit area was called the Sandy clay loam in the northeast part and the Knox sand in the southwest in an early report (See Shannon, 1912, Soil Map. There has been not re-correlation of these soil types.

The measured section described below was taken in the southeast corner of the new excavation (see accompanying sketch map). This section was measured by hand leveling and with a steel tape. Sample S5039 includes the lower 13.7 feet of Unit 1 of the described section. The upper 5 feet of Unit 1 was inaccessible because of the steepness of the face.

Unit	Description	Thickness in feet
3.	Soil:- Light brown silty soil	2.0
2.	Clayey gravel:- Gravel imbedded in a dark brown, sticky, clayey soil.	2.2
3.	Sand and gravel:- Quite well stratified, but generally poorly sorted. Deposit shows some cross bedding. There is a wide range of sizes, including occasional large blocks of country rock.	18.7
Total thickness of measured section		22.9

Operations -- Gravel is removed from the pit with a loader on a diesel caterpillar (2 ton bucket). The new (southeast) pit is now being worked, but the county plans to install a dragline in the old (north) pit. The gravel is used on county roads and for other county work.

All transportation of material is by truck.

Production -- In 1950 the pit has been producing 75 to 100 yards of pit run gravel per day. According to the file card compiled by H. W. Kugler, when in operation the pit produced 100 to 300 yards per day in 1949.

Reserves -- No figures were available for estimating the reserves of the pit area.

Respectfully submitted,

Robert E. Sargent

Robert E. Sargent
Party Chief

Fidlar, M. M. (1948) Physiography of the Lower Wabash Valley, Indiana Dept. of Conservation, Div. of Geol. Pub., Bull. No. 2, 112 pp., 5 Pls., 3 figs..

Shannon, C. W. (1912) Soil survey of Clay, Knox, Sullivan, and Vigo Counties, Indiana, Indiana Department of Geology and Natural Resources, 36th Annual Report, pp. 135-280, 4 maps.

77-6
July 26, 1950

MEMORANDUM REPORT BY ROBERT E. SARGENT

THE MEROM GRAVEL CO., INC., SULLIVAN COUNTY

Date of field examination -- July 20, 1950.

Location -- The Merom pit is located $2\frac{1}{2}$ miles south of Merom, in Sullivan County, in the SE $\frac{1}{4}$ sec. 30, T.7N., R.10W..

Ownership -- The pit is owned by the Merom Gravel Co., Inc.. The corporation owns the land on which the pit is located (400 to 500 acres). Laura May Koehne is president of the corporation.

The plant is under the management of W. H. Wyckoff. Assistant manager is Frank Land.

Information for this report was furnished by Frank Land, assistant manager of the plant.

Geology -- The deposit is located in the glacial sluiceway now occupied by the Wabash River (See Leverett and Taylor, 1915, Pl. 6). The deposit consists of valley train material buried under the present flood plain (See Fidler, 1948, Pl. 1).

The overburden of the pit area was called the Wabash silt loam in an early report (See Shannon, 1912, Soil Map). This soil type has not been re-correlated.

The section described below was measured near the northwest corner of the west pit (see accompanying sketch map). The section was measured with a steel tape, and includes all the exposure above water level.

Unit	Description	Thickness in feet
4.	Overburden:- Dark brown mealy loam	1.5
3.	Clayey gravel:- Gravel imbedded in a dark brown clayey soil.	1.3
2.	Gravel and soil:- Gravel imbedded in a red-brown mealy soil.	1.0

Unit	Description	Thickness in feet
1.	Sand and gravel:- Well stratified and quite well sorted. Shows cross bedding. Gravel is subangular to sub-rounded in texture.	8.7
Total thickness of measured section		12.5

The operator of the centrifugal pump stated that occasional pieces of coal were brought up, although none were seen in Unit 1 of the above section.

Samples -- Sample S5040 was taken from the conveyor belt and the sand stockpile according to the direction of Frank Land, assistant plant manager. Mr. Land stated that the deposit is approximately 50 percent sand. The conveyor belt carries material from the initial screening operation to the main screens. However, 50 percent of the sand, or 25 percent of the material pumped, is removed in the initial screening (the amount of sand removed depends on the material being produced at the time). Therefore, 75 percent of the sample was taken from the conveyor belt and 25 percent from the sand stockpile. The sample, therefore, is only an estimation and not a true representation.

Operations -- Gravel is now being removed from the pit with a centrifugal pump. The pump has a 12 inch pipe. Gravel is being taken from a point near the north face of the west pit (see sketch map).

Sand and gravel are transported by truck and railroad. The rail transportation is on the Illinois Central Railroad from Riverton, less than one quarter mile north of the pit. A spur comes to the plant.

Production -- The daily production of the pit is 1000 tons (in an 8 hour day). In 1948 the plant produced 210,000 tons of sand and gravel. Production figures for 1949 are not available.

The plant produces sand and gravel in all standard sizes below 2 inches.

Reserves -- No accurate figures on reserves were obtainable.

The present operation has shown sand and gravel to have a thickness of approximately 50 feet. The corporation owns 400 to 500 acres of land (Mr. Land, the assistant manager, does not know exact acerage), but there has been no test drilling to show if this thickness remains constant.

Respectfully submitted,

Robert E. Sargent

Robert E. Sargent
Party Chief

-
- Fidlar, M. M. (1948) Physiography of the Lower Wabash Valley, Indiana Dept. of Conservation, Div. of Geol. Pub., Bull. No. 2, 112 pp., 5 Pls., 3 figs..
- Leverett, F. and Taylor, F. B. (1915) The Pleistocene of Indiana and Michigan and the history of the Great Lakes, U. S. Geol. Sur., Monograph vol. 53, 529 pp., 32 Pls., 11 figs..
- Shannon, C. W. (1912) Soil survey of Clay, Knox, Sullivan, and Vigo Counties, Indiana, Indiana Department of Geology and Natural Resources, 36th Annual Report, pp. 135-280, 4 maps.

Memorandum Report
by
Michael C. Moore
July 5, 1974

County: Sullivan
Company: Abram & Hawkins, Excavating Co., Inc.
Address: R. R. #1, Box 390, Highway 41 South, Sullivan, IN 47882
Phone: 812-268-4806
Officers: Jerry Abrams, Pres., Jerry Hawkins, Mgr.
Descriptive Location: 2.8 mi. west of Graysville on SR 154, then N $\frac{1}{2}$ mi.
Congressional location: NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T. 8 N., R. 11 W., Merom 7 $\frac{1}{2}$ ' quad
No. of Employees: 2 in gravel, others in associated businesses
Products: #5L and #12 gravel; fill sand, mason sand and oversize

This pit was formerly run by Burton Gravel and has been in existence for 30 years. Abram & Hawkins took over 4 years ago when Mr. Burton, who still owns the surrounding land, retired. Two thirds of the material is carried in company owned trucks and the rest by independent operators. The market area extends as far as Farmersburg to the north and Carlisle to the south, but the mason sand is sold mostly in Illinois. The fraction of plus 1 $\frac{1}{2}$ " used to be crushed, but this is not presently being done.

A chain-ladder dredge with a 50 foot reach is used with a 10 x 8 pump. There is an average of about 1 foot of Fox-type soil overburden above flat-lying gravel beds. Fifteen to twenty feet of the gravel is normally dry and 40 to 50 feet are below water level. The pit is just south of the S. & G. Excavating Co. pit.

Date of field visit: June 26, 1974

Memorandum Report
by
Michael C. Moore
July 3, 1974

County: Sullivan
Company: S & G Excavating
Pit: Graysville Plant
Mailing Address: R. R. #1, Merom, Indiana
Phone: 812-382-3961
Officers: Jack Steiner, Kenney Steiner
Descriptive Location: $2\frac{1}{2}$ mi. W of Graysville on SR 154; then north on Co.
rd. 1 mi. and W on gravel rd $\frac{1}{2}$ mi.; on S side.
Congressional Location: $S\frac{1}{2}$ SW $\frac{1}{4}$ section 14, T. 8 N., R. 11 W. Fairbanks
 $7\frac{1}{2}$ ' quad
No. of Employees: 8
Products: ISH #4, 5L, 7, 12 gravel; 53, 73, 14-2 sand
7's and 12's to concrete pipe plant in Terre Haute

This pit was opened to supply a highway contract in 1971. It has two crane draglines with 1-3/4 yd buckets and three end loaders. The sand to gravel ratio is 50-60/50-40 and about 1/5 of the material larger than the #4 screen is crushed. There are few large boulders, however. The dragline works to a depth of 20 feet below water and there is approximately the same thickness including soil, above water. The coarsest material is above water and the deposit is very sandy below. This is a small lease, just north of the Abram & Hawkins pit. The company operates 3 trucks and the rest of the hauling is by private contractors. The market area has a radius of about 20 miles and some material, noted above, is shipped to Terre Haute where the company has another pit.

Date of field visit: June 26, 1974

Memorandum Report
by
Michael C. Moore
July 5, 1974

County: Sullivan
Company: West Carlisle Gravel Co.
Mailing Address: Rt. 3, Carlisle, IN
Phone: 812-398-2161
Officer: Tom Hamilton, Sullivan In., Owner
No. of employees: 1
Descriptive location of pit: $6\frac{1}{2}$ mi. W of Carlisle on SR 58; N $\frac{1}{2}$ mi. on gravel
rd.
Congressional Location: NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 6 N., R. 10 W., Heathsville
 $7\frac{1}{2}$ ' quad.
Products: 5L and 12 gravel and concrete sand

This small pit uses a 6" pump to work a deposit which has about 70% sand. Two-thirds of the sand is wasted back to the pit. Some mud, hardpan and large rocks complicate the mining, but no material is crushed. The plant can produce 90 TPD, but was shut down due to high water at the time of this visit. The company has been at this site for 6 years, but there has been a pit since 1916. At normal water there is 10 feet exposed and 38 feet below water level. The land is owned by Mr. Steel and he is paid a royalty on the 2 to 3 acres mined each year. The material passes state specifications, but none has been sold to the state for 3 years. Independent truckers carry the gravel over a radius of 10 to 20 miles.

Date of field visit: June 26, 1974

Memorandum Report
by
Michael C. Moore
July 5, 1974

County: Sullivan
Company: Sullivan County Highway Dept.
Mailing Address: Sullivan County Highway Dept., Sullivan, Indiana
Phone: 812-398-2160
Descriptive Location: 6 mi W of Carlisle on SR 58; N $\frac{1}{4}$ mi.
Congressional Location: NW $\frac{1}{4}$ sec. 11, T. 6 N., R. 10 W., Carlisle 7 $\frac{1}{2}$ ' quad
No. of Employees: 5
Products: This pit supplies almost all of Sullivan County's #5 and #12
gravel, fill sand and paving sand.

The pit is continuous with the pit of the West Carlisle Gravel Company to the north. The county has operated this pit for 15 years on a 40 acre tract. Approximately 6 acres remain unmined. An 8" pump is used to a depth of 50 feet to mine the 40% sand, 60% gravel deposit. Material larger than 1 $\frac{1}{2}$ " is screened off, but no crushing is done. About 18" of soil are removed to work 12 feet of dry bank and 50 feet of wet pit. The material is finer-grained and grayer with depth. A tree was encountered at a depth of 20 feet at one time, and a continual problem is large rock, especially "slate" at maximum depth.

Date of field visit: June 26, 1974

Memorandum Report
by
Michael C. Moore
Geologist, Industrial Minerals

On November 8, 1974, I augered one hole, with the help of Marvin Iverson, in an attempt to substantiate a rumor of bauxite in Sullivan County.

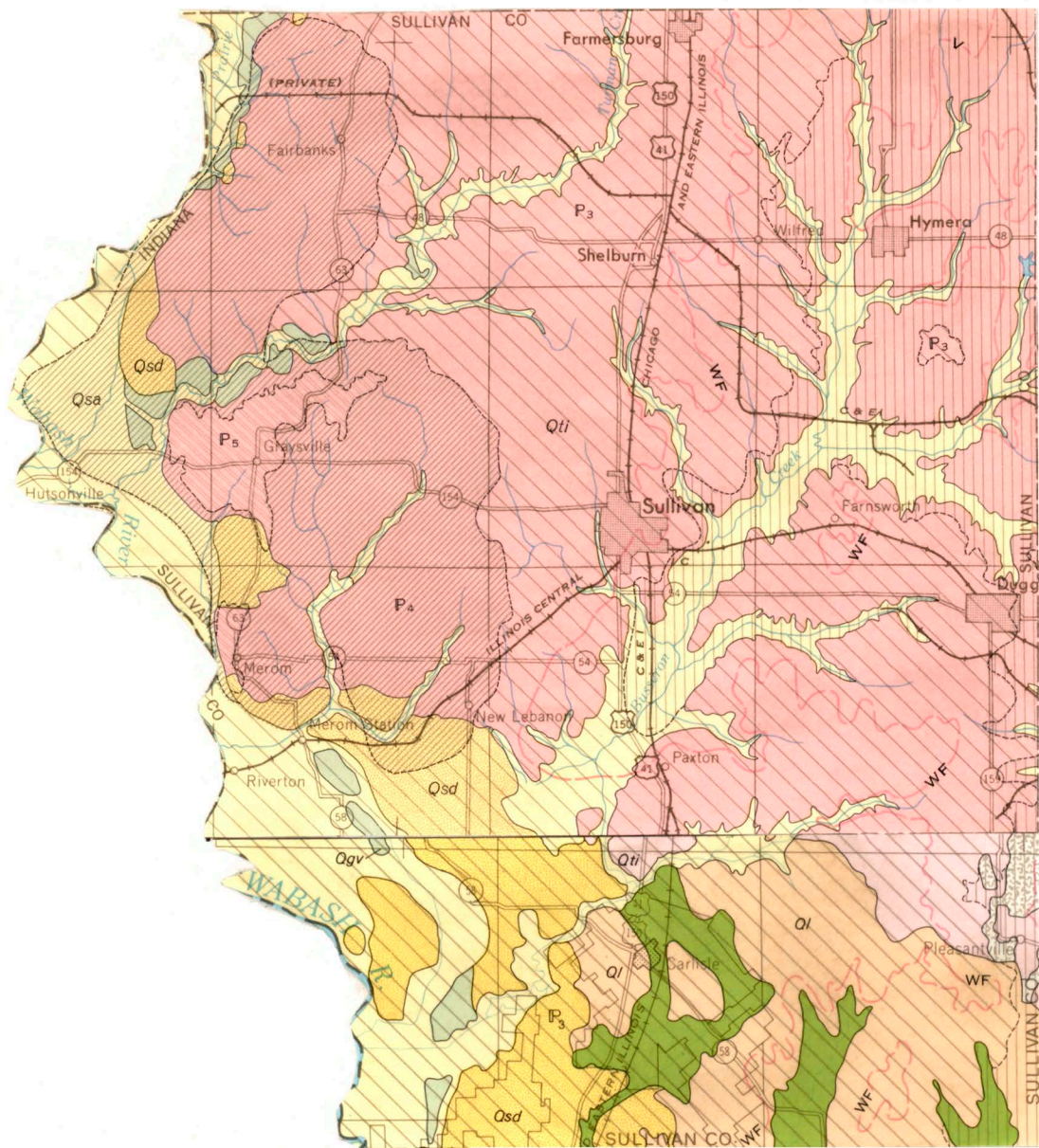
Hole MM74 A 176
NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T. 9 N., R. 10 W., Fairbanks 7 $\frac{1}{2}$, Sullivan Co.
el. approx. 545

Feet		Samples
0-3	Soil, Dark gray clay loam	0-3
3-6	Clay, sandy, brown, oxidized	
6-8	Mud, soft, sandy, gray-brown	
8-27	Mud, sandy, gray-brown, soupy, calcareous	10-12 12-17 25-27
27-28	Till, reddish brown, calcareous, hard	27-28

We were unable to make much progress in this till and therefore abandoned the hole.

MCM:plt
11/13/74

77-0



T 9 N

T 8 N

T 7 N

T 6 N

R 11 W

R 10 W

R 9 W

R 8 W

