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## MEMORANDUM REPORT BY JOHN B. PATTON

## SAND AND GRAVEL DEPOSITS OF HANCOCK COUNTY

Date of field examination.--- June 29 and 30, 1949.

Sources of information.--- The road materials of Hancock County were described in an early report (Taylor, 1906, pp. 500-512) that showed many more productive deposits than are now used.

No topographic maps have been completed in the county. A good soil map is available (Tharp and Simmons, 1930).

Geology.--- Hancock County was covered by the Illinoian and Wisconsin ice sheets. The frontal moraines of the Bloomington morainic system cross the southeast corner of the county. (See Leverett and Taylor, 1915, plate 6.) A narrow projection of Bloomington morainic drift extends across the county from the northeast part to the southwest corner. (See Malott, 1922, plate 3.)

Major drainage tends to flow to the south and southwest. The major streams are Big Blue River and Brandywine, Sugar, Nameless, Buck, Little Sugar, and Six Mile Creeks. Gravel deposits were found or reported in the valleys of all except Buck and Little Sugar Creeks, which lie within till plains and have had no access to gravel.

Brandywine Creek flows partly in an old sluiceway which extends from Grant County south to Shelby County, where it joins Big Blue River. This sluiceway contains the county's most abundant sand and gravel supply, and it has three active pits at the present time. A new pit  $3\frac{1}{2}$  south of Greenfield has removed gravel to a depth of 35 feet. Approximately half a mile southeast of Greenfield 40 feet of gravel with a sand-gravel ratio of 60-40 was reported. A pit  $1\frac{1}{2}$  miles north of Greenfield has been excavated to a depth of 25 feet in gravel. Southeast of Eden 70 feet of gravel have been found in an abandoned stretch of the sluiceway, but the upper part of this

thickness is apparently in a kame bordering the sluiceway.

East of Mohawk, in Sugar Creek, a sand-gravel ratio of 45-55 has been estimated for the material from a pit 35 feet deep. Many abandoned pits were also found in Sugar Creek.

No accurate data could be obtained on the deposits in Nameless and Six Mile Creeks. Abandoned pits prove that both valleys contain gravel. Both of these streams flow through moraines of the Bloomington morainic system, and Six Mile Creek was a channel of glacial drainage.

Kames have been a source of gravel in the morainal regions of Hancock County. One active pit is located partially in a kame, but the deeper workings have been carried into an adjacent sluiceway. Many abandoned pits were found in kames. An unusual occurrence of sand fine enough for use in molding was found in an abandoned pit in a kame in the SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 16 N., R. 7 E.

Fox, Bellefontaine, Abington, Westland, and Homer soils are usually underlain by sand and gravel. The Eel and Genesee soils, both of alluvial origin, often overlie sand and gravel in valleys which have been channels of glacial drainage. All areas favorable for the occurrence of sand and gravel have been outlined on the county soil map.

Sources of material.-- Hancock County produces sufficient sand and gravel for its own needs, although some of the material used near the county border comes from adjacent counties. Of the five active pits, only one produces washed and sized material. One inactive pit and 15 abandoned pits were visited. Additional abandoned pits are known to exist, but all important sand and gravel resources have been investigated.

Respectfully submitted,

*John B. Patton*  
John B. Patton

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- Leverett, Frank, and Taylor, F. B. (1915) The Pleistocene of Indiana and Michigan and the history of the Great Lakes, U. S. Geol. Survey, Mon. 53, 32 plates, 15 figures, 523 pages.
- Malott, C. A. (1922) The physiography of Indiana, in Handbook of Indiana Geology, Indiana Dept. of Conservation, Pub. No. 21, pp. 57-256.
- Taylor, A. E. (1906) The roads and road materials of a portion of central and eastern Indiana, Indiana Dept. of Geol. and Nat. Resources, 30th Annual Rept., pp. 315-570.
- Tharp, W. E. and Simmons, C. S. (1930) Soil survey of Hancock County, Indiana, U. S. Dept. of Agriculture, Bur. of Chemistry and Soils, Series 1925, No. 23, 39 pages, map.

## MEMORANDUM REPORT BY ROBERT E. SARGENT

REEVES GRAVEL PIT, HANCOCK COUNTY

Date of field examination -- June 27, 1950.

Location -- Delbert Reeves' gravel pit is located 2 miles north and half a mile east of Maxwell, in Hancock County, in the  $E\frac{1}{2}SW\frac{1}{4}$  sec. 29, T.17N., R.7E..

Ownership -- The Reeves gravel pit is owned and operated by Delbert L. Reeves. The land on which the pit is located is owned by J. Avery.

Information for this report was furnished by Delbert Reeves.

Geology -- The pit is located in the glacial sluiceway now occupied by an intermittent tributary of Brandywine Creek ( See Leverett and Taylor, 1915, Pl. 6 ) and in the southwest edge of a small kame.

Sample S507 was taken from the northeast corner of the pit ( see accompanying map ), where the kame gravel is exposed. The gravel here seems to dip away from the center of the kame, which lies to the northeast. The gravel is stratified and fairly well sorted. From approximately 6 feet above water level to an indeterminable depth the gravel is coated with a red-brown silty material which fills the spaces between the pebbles. The overburden in the portion of the pit which is in the kame is Bellefontaine silt loam ( See Tharp et al, 1925, Soil Map ). Sample S507 includes only the upper 3 feet of Unit 1 of the section described on page 2. The lower 4.4 feet of Unit 1 was inaccessible for sampling because of slumped and washed-down material from above. This section was measured by hand leveling.

Unit	Description	Thickness in feet
2.	Soil:- Dark brown silty clay loam. Contains scattered pebbles and sand grains.	3.5
1.	Sand and gravel:- Fairly well stratified, shows some sorting. From 6 feet above water level to indeterminable depth the gravel is coated with a red-brown silty material which fills the spaces between the pebbles. A bed of gravel 0.5 feet thick, immediately above the red-brown silty material, has a black coating, possibly a metal oxide.	7.4

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Total thickness of measured section	10.9
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Almost the entire pit is in the glacial sluiceway described on page 1. Gravel has been found to a depth of 70 feet below the overburden. Only 4.3 feet of sand and gravel are above water level, and above this 3.4 feet of overburden. The overburden above the sluiceway is Fox silt loam ( See Tharp et al, 1925, Soil Map ). The section described below was measured by steel tape and taken from the west end of the pit ( See accompanying map ).

Unit	Description	Thickness in feet
2.	Soil:- Well compacted, light brown clay soil. Contains much sand and fewer scattered pebbles.	3.4
1.	Sand and gravel:- Well stratified and well sorted. Pebbles are subangular to subrounded. Shows some cross bedding	4.3

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Total thickness of measured section	7.7
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Samples:-- Sample S507 was taken from the measured kame section described on page 2. I believe it is representative of the kame gravel above water level.

Sample S508 was taken from the sluiceway gravel by slackline bucket. The bucket had been dropped several times due to mechanical defects leaving a pile of unscreened material. Sample S508 was taken from this pile. It is probably not as representative as would be desired .

Operations -- The pit was opened in kame gravel, but has been extended westward into the sluiceway. Gravel is removed from the sluiceway by slackline bucket and passed through  $1\frac{1}{2}$ , three quarters, and one eighth inch screens.

All transportation of sand and gravel is by truck. The material is taken to Maxwell, a distance of 2 miles.

Production -- The present daily production is 75 tons. The annual production of the pit is 13,000 tons. According to Mr. Reeves, capacity production is 400 tons per day.

Gravel is now produced in  $1\frac{1}{2}$ , three quarters, and one eighth inch sizes. However, equipment is now being installed which will all production of all standard sizes.

Reserves -- As no test drilling has been done, an accurate estimate of reserves can not be made. Mr. Reeves has 55 acres under lease, and has found 70 feet of gravel in the present pit. The thickness of the gravel may not remain constant as the pit is expanded, however.

Respectfully submitted,

*Robert E. Sargent*

Robert E. Sargent  
Party Chief

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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..

Tharp, W. E. et al (1925) Soil survey of Hancock County, Indiana, U. S. Dept. of Agriculture, Series 1925, No. 23, 39ppp., 1 fig..



July 3, 1950

MEMORANDUM REPORT BY ROBERT E. SARGENT

IRVING MATERIALS INC. PIT, HANCOCK COUNTY

Date of field examination. -- June 28, 1950.

Location. -- The Irving Materials sand and gravel pit is located 1 mile south and one half mile east of Greenfield, in Hancock county, in the NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9 T.15N. R.7E.

Ownership. -- The plant is owned by the Irving Materials Inc., and managed by C.C. Irving. Plant foreman is Edward Maynard. The land upon which the pit is located is owned by Edward Jackson.

Information for this report was furnished by Edward Maynard, foreman of the operation.

Geology. -- The Irving Materials pit lies in the Pleistocene Brandywine sluiceway ( See Leverett and Taylor, 1915, Pl. 6 ). As the pit is under water, it is impossible to obtain a description of the deposit. The pit has been found to contain gravel and sand to a thickness of at least 40 feet.

The overburden here is the Fox Silt Loam ( See Tharp et al, 1925, Soil Map ), which forms a terrace above the bottom land. Generally there is 3 to 3 $\frac{1}{2}$  feet of silty loam above 1 to 1 $\frac{1}{2}$  feet of clayey soil containing gravel pebbles and sand grains. In the northwest corner of the pit there is 2.1 feet of dark brown silty loam above 1.9 feet of blue clay. This blue clay extends around the west side of the pit to the point where Brandywine creek enters ( See sketch map ), but has not been observed beyond that point.

Samples. -- Sample S509 was taken from the bottom of the pit by dragline and is probably not as representative as would be desired.

Operations. -- The Irving Materials sand and gravel pit was opened in 1947. Sand and gravel are removed by an electrically powered slackline. All transportation is by truck.

The sand and gravel is sold to Hancock county, Greenfield, the state of Indiana, contractors, and private individuals. Some of the material is utilized in the company's ready-mix and concrete block plants.

Production. -- Daily production of the pit ranges from 400 to 500 tons per day. Capacity is 600 tons per day. In 1949 the pit produced 53,340 tons of sand and gravel.

Sand and gravel in all sizes except U gravel are produced.

Reserves. -- Although Irving Materials Inc. holds 50 acres under lease, only the southern 20 to 25 acres will be worked for sand and gravel. Gravel in the present pit has been found to be at least 40 feet thick, but it may not remain constant in thickness as the pit expands.

Respectfully submitted,



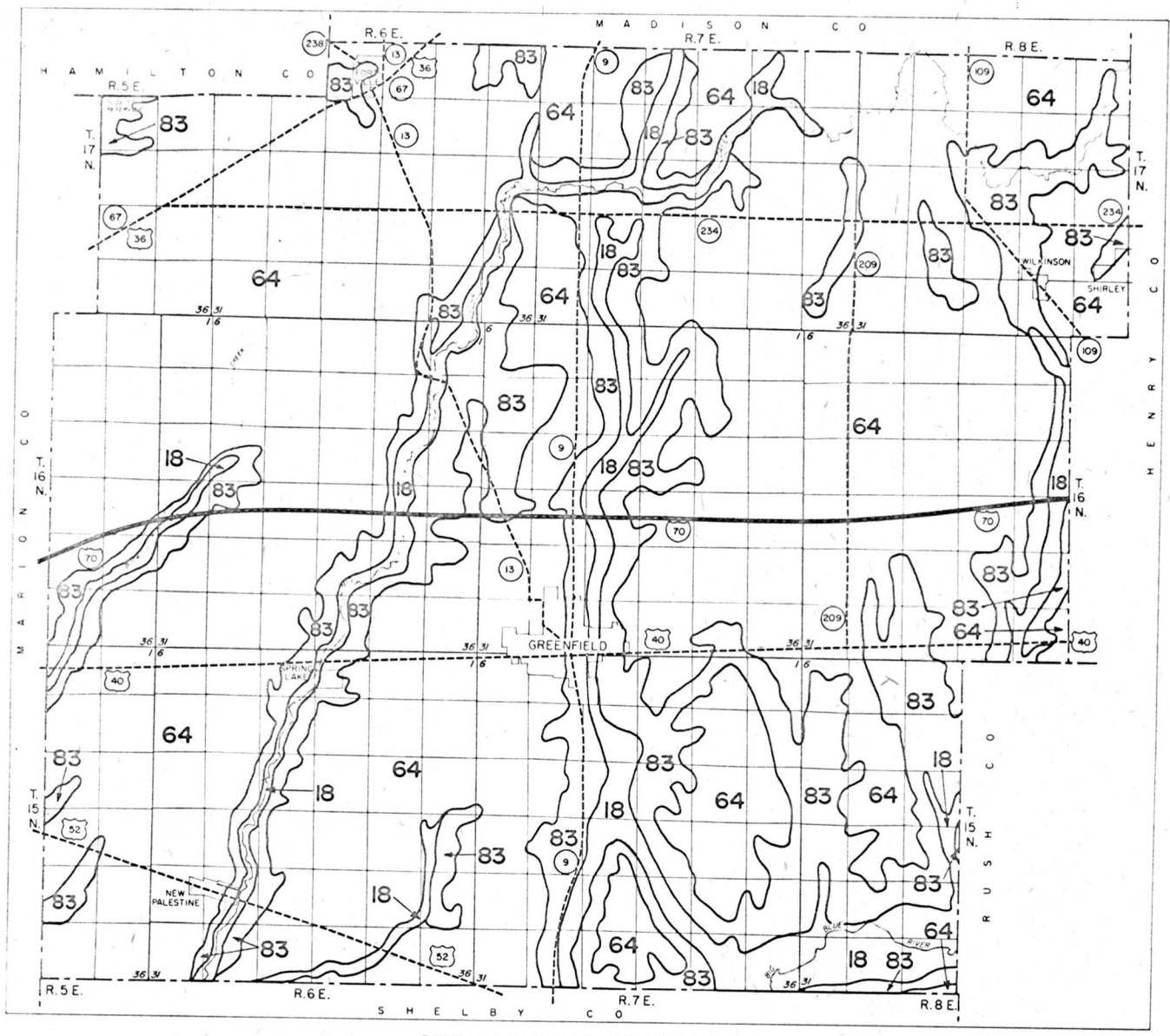
Robert E. Sargent  
Party Chief

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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.

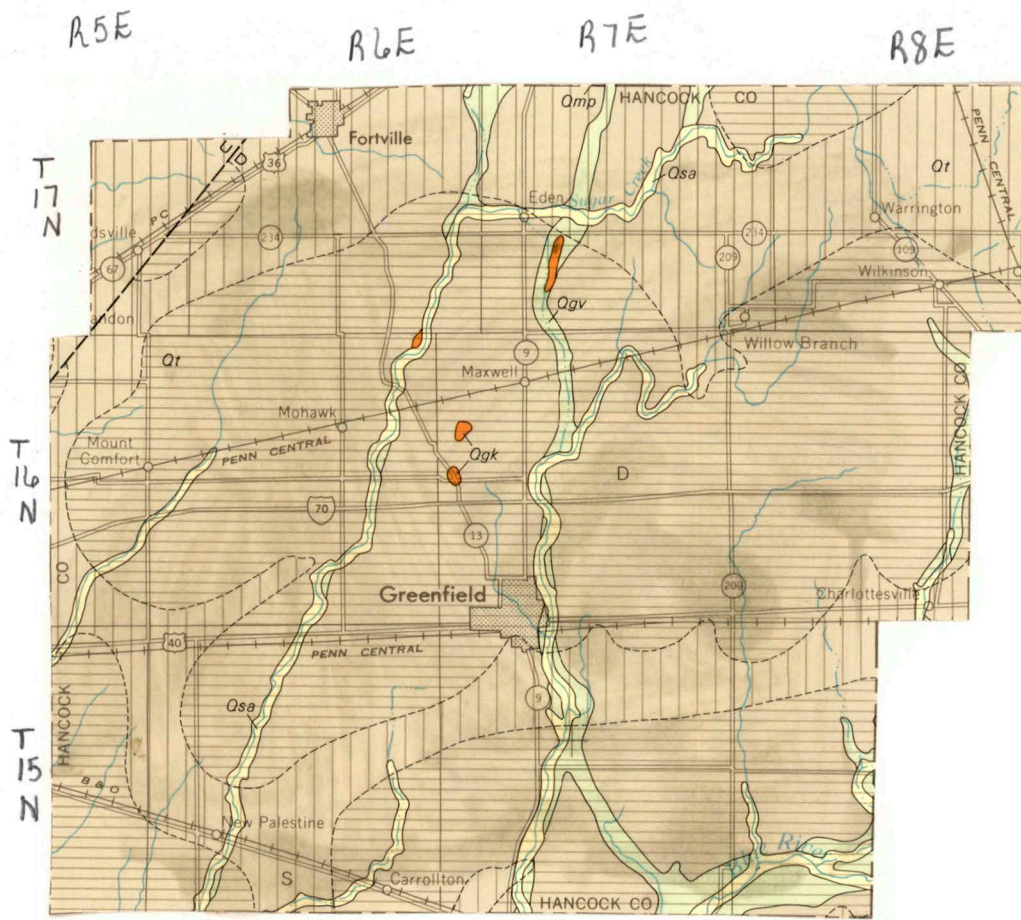
Tharp, W. E. et al, (1925) Soil survey of Hancock county, Indiana, U. S. Dept. of Agriculture, Series 1925, No. 23, 39pp., 1 fig..



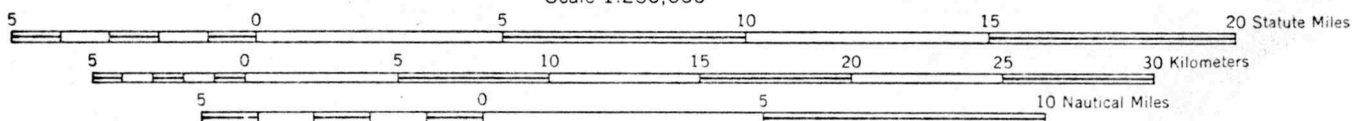
BASE MAP OF HANCOCK COUNTY, INDIANA

- 83. Miami Crosby
- 64. Crosby Brookston
- 18 Fox-Martinsville

30-E



Scale 1:250,000



Memorandum Report  
by  
Michael C. Moore  
January 21, 1974

COUNTY: Hancock  
COMPANY: D. L. Reeves Sand and Gravel  
MAILING ADDRESS: Box 81, Greenfield, Rt. 5 46140  
DESCRIPTIVE LOCATION OF PIT:  $2\frac{1}{2}$  mi. northeast of Maxwell  
U.S.G.S.  $7\frac{1}{2}$ ' TOPOGRAPHIC QUAD: Ingalls  
CONGRESSIONAL LAND SURVEY LOCATION: NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 17 N., R. 7 E., el. 890  
OFFICERS: Delbert Reeves, owner  
PHONE: 1-317-326-2234  
NO. OF EMPLOYEES: 2  
PRODUCTS: screened gravel  
SHIPPED BY: Own trucks  
CAPACITY (TPD or TPY):

The sand to gravel ratio in this pit is about 55/45, but the distribution is spotty. There are few large boulders scattered throughout the deposit, but a substantial pile of them accumulates over extended periods. Even the boulders, which are dominated by granitic type rocks, can be marketed locally. Cobble-sized material is crushed and processed. The primary product of the plant is mason sand which is sold as far away as Muncie, Anderson, Shelbyville and eastern Marion County.

A dragline with a 4 yard bucket strips from 2 to 5 feet of overburden leaving 3 to 4 feet of gravel above water level. The dragline can work to a depth of 50 feet and at that depth is seldom on hardpan.

DATE OF FIELD VISIT: January 17, 1974  
INFORMANT: Harvey Reeves

Memorandum Report  
by  
Michael C. Moore  
January 21, 1974

COUNTY: Hancock  
COMPANY: Strubbe Gravel  
MAILING ADDRESS: R. R. #6, Greenfield, Ind. 46140  
DESCRIPTIVE LOCATION OF PIT: 1 mi. north of Greenfield in valley of  
Brandywine Creek  
U.S.G.S. 7½' TOPOGRAPHIC QUAD: Greenfield  
CONGRESSIONAL LAND SURVEY LOCATION: NE¼NW¼ sec. 28, T. 16 N., R. 7 E.  
el. approx. 870  
OFFICERS: Ralph Strubbe, owner  
PHONE: 1-317-462-6282  
NO. OF EMPLOYEES: 3  
PRODUCTS: Pit run gravel, oversize (plus 1¼") screened off, fill dirt  
SHIPPED BY: Own trucks  
CAPACITY (TPD or TPY):

Since August of 1969 the company has been known as Strubbe Gravel. Prior to that time it was called Ed Strubbe and Son and the name was changed after the death of the elder Mr. Strubbe. The operation is still run by Strubbe and son, however, as Ralph Strubbe, Jr. represents the third generation in this excavating and gravel business. The family is well represented in Hancock County aggregate production, because Delbert Reeves of the D. L. Reeves sand and gravel Co. is Mr. Strubbe's uncle.

The Strubbes have operated this and adjoining pits for more than 30 years. They use a dragline to strip the soil and to mine from below water level. A ¾ or 1-¾ yard bucket may be used, depending upon the requirements of the job and materials. A Hough loader with a 2½ yard bucket is used to load sand from above water level. The market area radius is about 15 miles.

The thickness of the gravel ranges from 8 to 10 or 20 feet below water plus 6 feet of gravel and 4 to 7 feet of overburden above. The gravel contains shells and is mostly fine-grained. It is quite variable with pockets of sand or mud alternating with gravel. When sand pockets are wet the loader cannot work. About 80% of the deposit is played out, but Mr. Strubbe has been allowing fishing and the city limits now adjoin his property. He plans to grade the pit walls to a beach and perhaps develop the area into a park.

DATE OF FIELD VISIT: January 17, 1974  
INFORMANT: Ralph Strubbe, Sr.

Memorandum Report  
by  
Michael C. Moore  
January 21, 1974

COUNTY: Hancock  
COMPANY: Leary's Gravel Co.  
MAILING ADDRESS: R. R. #1, Box 283, Greenfield, IN  
DESCRIPTIVE LOCATION OF PIT: 2 mile north of Greenfield in Brandywine Creek Valley  
U.S.G.S. 7½' TOPOGRAPHIC QUAD: Greenfield  
CONGRESSIONAL LAND SURVEY LOCATION: SE¼NW¼ sec. 21, T. 16 N., R. 7 E.  
el. 880  
OFFICERS: Robert Leary, owner and supt.  
PHONE: none  
NO. OF EMPLOYEES: 3-4  
PRODUCTS: washed gravel  
CAPACITY (TPD or TPY): 125 TPH

A long abandoned pit is being reactivated by the Learys on a 150 acre farm that they own just one mile north of the Strubbe Gravel Co. It is reported that 50 acres are underlain by gravel and the deposit may be as deep as 50 feet. They will be under county zoning when they open this spring, but this area is in the Greenfield buffer zone. Cranes and loaders will be used to strip 6" to 20" of a Fox-type soil and mine the very sandy gravel. An Irving ready-mix depot just 1/4 mile away will use much of the expected production. The Learys presently have a bottle-gas distributorship.

DATE OF FIELD VISIT: January 17, 1974



