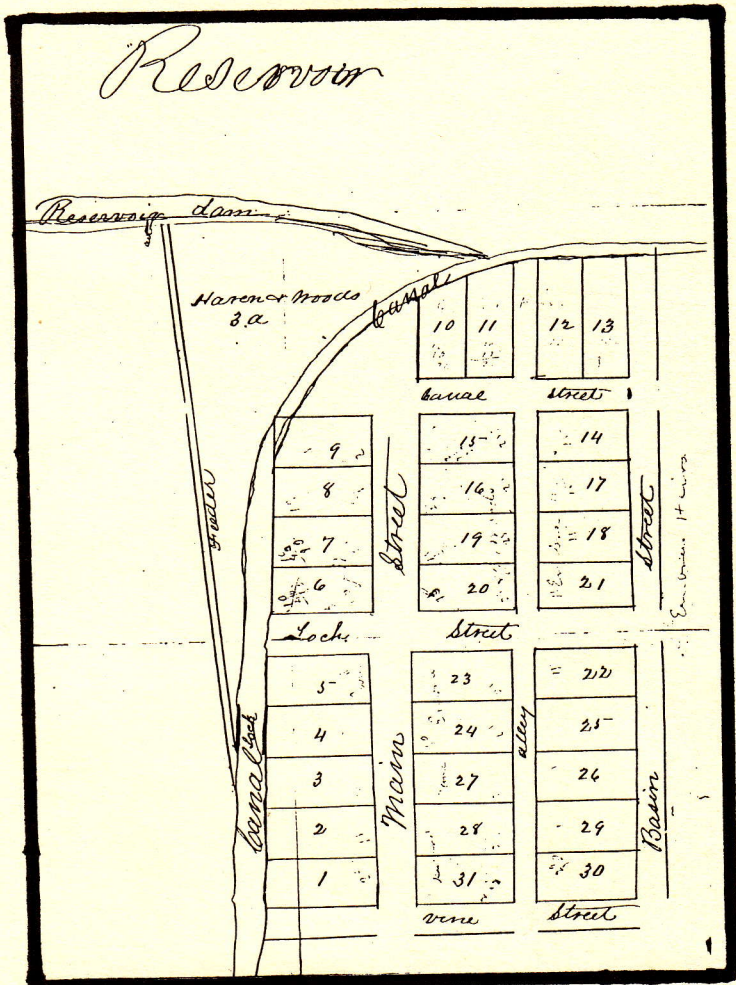


INDIANA CANALS

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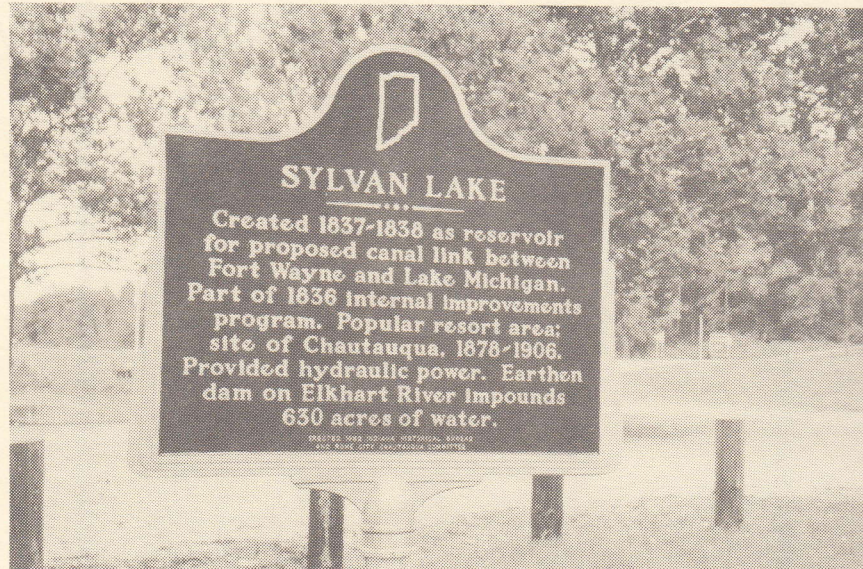


Port Gibson on the Pigeon creek reservoir



Erie & Michigan NORTHPORT RESERVOIR (SYLVAN LAKE) Rome City, IN

Today this beautiful 630 acre lake has become a resort area, but in 1839 it was the reservoir to feed the Erie-Michigan Canal being constructed near Albion to the south. Groups of construction workers of different nationalities did not work well together. Francis Aveline of Fort Wayne was the contractor. He sent the Protestants to the north end and the Irish Catholics to the south of the dam site. Those working on the south were told to "do as the Romans do" -- thus the town became known as Rome. The town was platted in 1839 but later the name was changed to Rome City.



Erie & Michigan SYLVAN LAKE HISTORICAL MARKER Rome City, IN

In a formal dedication ceremony on August 16th, this marker was placed by the Indiana Historical Bureau and the community. Located in lovely Sycamore Park just below the dam off IND 9, the marker will be a permanent reminder of the human effort required in 1837-1838 to build the earthen dam and other nearby works. Mary Ann & Jerry Getty represented the Society at the occasion. The next newsletter will cover the event and the 1992 Gene Stratton Porter Chautauqua Days that occur each year at this time.

INDIANA'S CANAL RESERVOIRS

The most essential element for the operation of a canal is an abundant water supply. In most cases this is accomplished by diverting water from a dammed river into the canal. If this proved insufficient, it was then necessary to construct reservoirs to store adequate supplies. On the Wabash & Erie Canal in Indiana these reservoirs were restricted to the southern half of the state.

With the exception of the Wabash & Erie Canal reservoir at Antwerp, Ohio, the sole reservoir in northern Indiana was the Northport reservoir at Rome City. This body of water, now known as Sylvan Lake, is the only major remains of the ill-fated Erie & Michigan Canal and surprisingly the only survivor of Indiana's four canal reservoirs. In southern Indiana three reservoirs were constructed between Terre Haute and Evansville. Splunge creek reservoir was the most important of the three, since it supplied the entire water supply for the 34 mile section at the Eel river summit. At this part of the canal it was necessary to lock up 79.2 feet south of Terre Haute, before locking down 163.5 feet to the Ohio River. The only possible way to supply the necessary water for lockage on both sides of the summit was to construct a reservoir on top. The resulting reservoir covered an area of 3,873 acres with up to 7 feet of water. After people in the area expressed some health concerns, the chief engineer and Dr. Ezra Reed examined the site recommended only that timber on the margins be removed. After a drought in 1851 it was decided that this reservoir might be insufficient and a second site was chosen at Birch creek. This second site covered 1,000 acres and was a source of local concern even before its completion. This was borne out by the locals cutting the reservoir in June 1854, May 1855, June 1855, and March 1860.

The final reservoir constructed was located on Pigeon creek. This 1,500 acre site was designed to supplement White river dam which fed the lower 93 miles of the canal. Upon completion of the

canal in 1853, a medical commission was appointed to examine all three of the reservoirs as to their possible effect on the health of the region. The report of this commission was sent by Roger Peterson who found it in the Owen County Archives.

When reading this report it must be remembered that the cause of malaria and yellow fever were not discovered until the Panama canal was constructed at the turn of the 20th century.

ADDITIONAL WATER POWER AT LOGANSFORT

SEALED proposals will be received at the office of the Auditor of Public Accounts, in Indianapolis, until Monday, THE 30TH OF OCTOBER NEXT, for the leasing of water power at Logansfort. The Lock (on the Wabash and Erie Canal,) at which the water power is to be leased, is eight feet lift, and it is supposed that water enough will be passed, ordinarily, to propel three or four run of stones-but three run only will be leased with the understanding that the lessee is to pay for all the water power that can be supplied-not to exceed three run, though the State will not be bound to furnish that quantity unless it will be required to supply the canal below. A sufficient portion of ground will be set apart for the use of the lessee, on which to erect his mill and for a mill yard. Bidders will state a price per power, being understood to be water sufficient to propel a run of four and a half feet mill-stones, when applied to an over-shot wheel of eight feet diameter. At this Lock there can be used a six and a half feet overshot wheel, or a pitch back or breast wheel of thirteen feet diameter.

The whole of this power will be leased to but one person or company. The Commissioner, Mr. S. Fisher, will show the ground to persons desiring to see the site. The highest bidder will be the lessee-if equal, to be determined by lot. Proposals may be sent by mail, directed to the undersigned, at Indianapolis.

M. Morris, A.P.A., Geo. H. Dunn, Treas., Wm. Sheets, Secy. August 28, 1843.

from the Delphi Oracle 10/7/1843.

To His Excellency, JOSEPH A. WRIGHT.

The Committee appointed by your Excellency, under an act of the Legislature of the 4th of March, 1853, to examine the Reservoirs of Clay and Gibson counties in the State of Indiana, having had the subject under consideration during the months of June and July, beg leave to submit the following as the result of their investigations:

SPLUNGE CREEK RESERVOIR, CLAY COUNTY.

This body of water covers an area of about four thousand acres, one-fourth of which is covered by timber in a state of decay.

The grounds now covered by the waters of this Reservoir were, previous to inundation, a low, wet, and swampy bottom, immediately adjacent to Eel river, which flooded it at every considerable rise.

Near the center of this Reservoir was a pond, which covered from twelve to fifteen hundred acres, which slowly dried away during the drier months of the summer, and exposed a heavy alluvial deposit, which omitted a most offensive smell. At such times the inhabitants were sure to become the sufferers from intermittent and remittent fevers. The higher portions of these grounds were overgrown in summer with a most luxuriant growth of grass and vegetable matter, from two to six feet high. This, too, was destroyed by the overflows, and left to decay after the water had subsided. All the lower places were left full of water, to slowly dry away by evaporation and percolation.

These grounds have been covered with water now about three years. The water is pure and clear, with the exception of that portion of it which surrounds the timber, which is slightly colored from vegetable extracts, which can in no wise contribute to the production of malaria. The water, in depth, ranges from a few inches to fifteen feet, and in an almost constant state of agitation, which greatly favors its purification.

At the north end of the embankment is constructed a Tumble, passing part of the waters of Eel River Feeder into the Reservoir. About the center of the embankment is the bulkhead, passing

the water directly into the Canal. Although Splunge Creek does not furnish running water during the dry season, yet the Reservoir is constantly in receipt of fresh supplies of water. The amount of water discharged, over that received from the Feeder, is supposed to be about one-half inch per twenty-four hours. The water passing over the Tumble, and the displacement, both have a beneficial influence in preventing stagnation. The water seems perfectly free from all unpleasant odor, and at no point does malaria seem to be generated, except around the exposed margin, which is the portion left uncovered from the lowering of the water one-half inch per twenty-four hours. When standing to the northeast, along the prairie side, there seems to be a decided pernicious influence exerted, none of which is attributable to the standing timber, which is in the southeast border of the reservoir.

Malaria, or miasmata, has, at all times and under all circumstances, eluded the finest chemical analysis, and no manipulation, however delicate, has ever been able to detect its presence. We see vegetable matter under the combined influences of heat and moisture—we smell an unpleasant and offensive odor—we see, in those exposed to these influences, intermittent and remittent diseases. We say malaria is the remote cause; but little more is known of it than that in certain localities emitting offensive odors certain diseases are prevalent. We call them malarious. Experience proves that an excess of moisture suspends, to a great extent, the generation of this agent, and, likewise, that an entire want of moisture stops the decay of vegetation; therefore, malaria ceases to exist in those very places where, a short time before, the most pestilential diseases were prevailing. Timber, standing or falling, divested of its foliage, can in no wise contribute to the production of this agent. The decomposition of the ligneous fibre can but resolve itself into its original gases, carbon, hydrogen and oxygen, or into carbonic acid, hydrogen, or light carbonated hydrogen. When the cellular connection of the timber is destroyed, and the succulency dissipated, the drying process commences, and though moisture

may be externally applied, no malaria can be the result. If the ligneous fibre resolves itself into its original gases, and they are those mentioned, if they hold any connection whatever with miasmata, why does not chemical analysis make the same manifest? In the most marshy and pestilential portions of Italy, where no man has ever slept without an attack, no more carbonic acid exists in the atmosphere than in the most salubrious climes. If carbonic acid was generated by an excess of moisture, a great portion of it would be absorbed by the water, while the light carbonated hydrogen generated under these circumstances, when free, would ascend into the higher regions, where no influence could be exerted upon the hygiene of the surrounding country. Carbonic acid, no doubt, may be an agent of the disease when concentrated, but not when slowly produced in the open air from the denudation of ligneous fibre. If the timber, in falling, should stop at or near the surface of the water, footing would be gained for the growth of moss and other aquatic plants, none of which, while living, can in the least contribute as causes of disease. They would be destroyed by the freezes of winter, and slowly decompose during the warmer periods of that portion of the year. But little deleterious influence would be exerted. There seems to be no source of malaria at the Reservoir, except the exposed edge from the lowering of the water, and this is but small in comparison to the previous state of these grounds.

It is the opinion of this Committee, that any body of fresh water receiving and discharging the same amount that this reservoir does, and constantly kept in motion by the winds of that prairie country, could not alone, under the most adverse circumstances, become a source of disease.

We are of the opinion, after carefully comparing and investigating the present condition of the Reservoir with its previous state, that there is far less cause of disease at present, than before the grounds were permanently submerged.

BIRCH CREEK RESERVOIR, CLAY COUNTY.

The area of this Reservoir is about one thousand acres, not yet complete, which give a fair

opportunity to see the primitive state of these grounds. The soil is argillaceous and but little fitted for the escape of water by percolation. The surface is flat, covered with a layer of vegetable matter in a state of decay. The surface is subject to overflow from the creek, and from any considerable rain. Numerous indentations, partially filled with stagnant water, strongly impregnated with vegetable matter in the most offensive condition, are spread out all over the entire territory. The timber is heavy, and composed of almost every variety of forest trees, undergrown with brush and grass, many places so thick that it is with difficulty penetrated. The heavy growth of timber does, to a certain extent, prevent both the generation and spread of malaria. The whole presents to the view a most ghastly appearance, having in its very midst the elements of the diseases most common to our country.

Will the submerging of these grounds exert a deleterious influence upon the hygiene of the surrounding country? If submerged in midsummer, when the foliage is upon the trees, and the grass growing upon the ground, there would be exerted for a time a pernicious influence; but if submerged in the latter part of the fall or winter, no direct evil influence would be generated.

What effect would follow from the complete removal of the timber? If the timber be cut away and the direct rays of the sun let in upon the surface in its present condition, an infinitely worse state of things would follow than from the submerging of the same grounds under the most unfavorable circumstances. By this process we expose vegetable matter, stagnant pools of water impregnated with a vegetable matter, and an alluvial deposit—all the most favorable circumstances for the generation of malarious poison. Aside from that the destruction of the timber will give free circulation to the atmosphere, and malaria, rapidly generated in this way, would spread with greater facility, and disease would be the impendent result. In cases where heat and moisture are present, in their proper proportions, the effect will be comparative

to the relative state of decay. The more readily the substances enter into the decomposition, the greater will be the amount of deleterious agencies given off in a given time. Of all conditions favoring the rapid generation of a poisonous agent from decomposition, water impregnated with such vegetable products as most readily decompose is the most favorable for the rapid generation of miasma, especially when these pools are shallow and stagnant, and the motion of air are precluded. In reference to the standing timber in this, as in Splunge Creek Reservoir, it can have, in the opinion of the committee, no bad effect upon the health of the surrounding country.

From inquiry we learn, that the greatest complaint against Splunge Creek Reservoir comes from regions which decidedly are, and ever have been, pestilential and filled with malarious diseases, at a distance from two to five miles from the Reservoir, which has been claimed to be the great source of difficulty. There is between those persons and this body of water a dense forest, which all experience proves would act as a barrier to the spread of this poison. Then some occult cause must have been the exciting agent in this case, and not the waters of the Reservoir.

There is no doubt that if grounds of Birch Creek Reservoir were once cleared and then submerged, an infinitely better state of things would exist than does or can exist under any other circumstances. But if those grounds were once permanently submerged with the timber standing, after a time all deleterious influences would be at an end; but while permitted to exist in its present condition, time knows no termination to its pernicious influences, while heat and moisture are elements of decay. The fringes of this Reservoir are also being cleared of their timber, which can have but little good effect. Permanent submerging in all these grounds want to greatly improve the health of their immediate neighborhoods. In reference to the Feeder Dam in Eel river, all the bad effect that would probably result would be from the exposure of the sand and mud bars in the bed of the river below the Dam. These, no doubt, do exert

an influence while undergoing the drying process. The difference between this and ordinary dams for milling process is, the water in this pond remains at the same level during a regular stage of water, keeping entire submerged its overflowed banks, while small streams (of which most complaint is made), are subject to constant changes, thereby exposing alternately the sand and muddy banks to the direct rays of the sun.

PIDGEON CREEK RESERVOIR, GIBSON COUNTY.

This Reservoir covers an area of about fifteen hundred acres, partially filled with water, which presents a dark and filthy appearant, not difference, however, from the water in the creek itself beyond the influence of the Reservoir.

The soil is thin, argillaceous, and covered with a layer of decaying vegetable matter, subject to inundation, both from heavy rains and rises in the creek. On the west, extending north, is a very marshy, wet swamp, from two to six rods wide, and about three-fourths of a mile in length. The partial filling of this Reservoir will be a disadvantage during the coming autumn, but when once filled will add greatly to the improvement of the hygiene of the country. The timber is heavy, and comprises the major variety of the forest trees of this latitude, interspersed with undergrowth and grass. During the destruction of the foliage and grass, soon after submerging these grounds, there will be a new source of miasmata, ceasing, however, almost entirely when that crop is decayed. Not a greater amount of poisonous influence would result from this than from the clearing away of the timber; and to take the Reservoir in its present condition and drain it, which would have to be done before the timber could be removed, fourfold greater damage would result to the surrounding country than from the complete inundation of the whole territory at the worst season of the year. When the great Reservoir of Mercer county, Ohio, was first constructed and partially filled, the people, fearing the consequences, met and opened the bank. The result was, that never in the history of the country did disease become so common

and fatal.

The fringes of this Reservoir are also being cleared of timber, so that the rise and fall of six feet will not expose any grounds having on them standing timber. As the subject of standing timber has often been referred to, we deem a farther notice of it unnecessary.

The Committee, after having finished their investigation of the Reservoirs of Clay and Gibson counties, had the privilege of inspecting some of the artificial lakes of Ohio. These Reservoirs have been constructed from twelve to fifteen years, where time sufficient has elapsed to see the practical effects of such collections of water. The great Reservoir of Mercer county, being the largest artificial lake in the world, covers about seventeen thousand acres of land, nine thousand of which was dense forest when submerged.

Although great fears were entertained as to its effect upon the health of the country at the time, yet all now freely acknowledge that it has been a decided advantage in point of health.

Dr. Stevens, who has practised medicine for eighteen years in the vicinity of this body of water, says the health has gradually improved since the filling of the Reservoir. Mr. Sawyer, ex-member of Congress, and the citizens living near, all say, without a dissenting voice, that the hygiene of the country has been greatly improved by the construction of the Reservoir.

The topography of this region is not essentially different from that of Splunge Creek, in Indiana, being wet and swampy, previous to being submerged. Much of the timber is yet standing, although the Reservoir has been filled thirteen years. After falling it soon disappears, and no appreciable influence is in the least traceable to it. All our investigations in Ohio only go to confirm our previous opinions as to what will be the practical effects of these collections of water in the counties of Clay and Gibson, Indiana.

All of which is respectfully submitted.

Joseph C. Cook, Chairman., A.D. Gall, Secretary.,
John L. Ford., Samuel Grimes., Matthew Smith.

In past issues of INDIANA CANALS we published the Wabash & Erie Canal mechanical structure list from the 1847 Trustees' report. Upon completion of the canal in 1853 a new report was made to the Trustees. In future issues we will continue to publish this list of mechanical structures south to the termination of the canal at Evansville.

We have, first, the Coal creek dam, which is 202 feet long and $17\frac{1}{2}$ feet high above low water. On each side of this there is a guard lock, with walls 12 feet high, raising them $11\frac{1}{4}$ feet above bottom of canal. At this point there is also a road and tow-path bridge 200 feet long; road-way 14 feet wide in the clear, and tow-path $5\frac{1}{2}$ feet wide in the clear. The bridge consists of two spans of 60 feet each, and two spans of 40 feet each. The bents are founded on cribs, suitable for stone piers. The Coal creek dam is built on the plan generally adopted north of Lodi, having a foundation of brush and trees.

Culvert No.141, situated a short distance below the Coal creek dam, consists of one opening of 10 by $2\frac{1}{2}$ feet in the clear, being 113 feet long. Top of culvert $7\frac{1}{2}$ feet B.

Road bridge No.72, at Howard.

Millcreek aqueduct No.10, consists of one span of 40 feet clear, with timber abutments, resting on a foundation of timber, extending entirely across the bed of the stream. Top of foundation 13 feet B.; open trunk, with side braces meeting in the center, from which the middle beam is suspended under the trunk timbers.

Road bridge No.73, at Nugents.

Road bridge No.74, at Campbell's ferry.

Road bridge No.75, West Union to Davis' Ferry.

Sugarcreek aqueduct, No.11, consists of three spans of 80 feet clear; the chords of the truss frame being $22\frac{1}{2}$ feet above low water. The piers and abutments of this structure are built of cut stone masonry, the foundations of timber being placed about three feet below low water of the creek, and well protected with brush and stone, carefully laid in. The plan of the superstructure is similar to the Shawnee aqueduct, the truss frame

being $14\frac{1}{2}$ feet high from the bottom of the lower chord to the underside of the upper chord or plate.

The lower chord is 18 inches deep.

Just below the Sugarcreek aqueduct, lock No.38, of 6 feet lift, is introduced. This is built upon the frame plan, consisting of a double set of bents, one resting upon the top of the other, and secured by iron rods $1\frac{1}{8}$ inches diameter, placed immediately back of the front posts, and extending first from the foundation timber to the cap of the lower bent, and then from said cap to the cross tie, connecting the front and back coping timbers of the lock. The foundation consists of timbers from 37 to 47 feet long, 12 inches thick, placed about six inches apart, covered with two courses of 2 inch plank. The posts of the lower bents are framed into the foundation timbers.

Road bridge No.76, Rockville to Davis' Ferry.

Road bridge No.77, at Saxton's Ferry.

Road bridge No.78, one mile above Montezuma.

Road bridge No.79, upper part of Montezuma.

Road bridge No.80, lower part of Montezuma.

Culvert No.142, at Montezuma, length 122 feet, 4 by $1\frac{1}{2}$ feet clear. Top of culvert 10 feet B.

Culvert No.143, near Armiesburg, same dimensions as No.142.

Road bridge No.81, at Armiesburg.

Raccoon creek aqueduct, No.12, consists of two spans of 90 feet clear, the top of the pier and abutment being $26\frac{1}{2}$ feet above low water. The pier and abutments are of cut stone masonry, on foundations of timber, protected with stone and brush. The superstructure is similar to that of the Sugarcreek aqueduct, except that on top of the main chords there is a second chord, consisting of three thicknesses of 2 inch plank, 12 inches wide. The truss frame is $17\frac{1}{2}$ feet high from the bottom of the chords to the top of the plate. All the aqueducts of this plan are roofed, weather-boarded and painted, to protect the main timbers from the weather.

Road bridge No.82, at Puntey's.

Lock No.39, of 6 feet lift, $2\frac{1}{2}$ miles below Raccoon creek, is built upon the same plan of that last described.

Road bridge No.83, at Justice's.

Culvert No.144, one and a half miles below the lock, consists of one span 10 by 2 feet in the clear. Length 94 feet. Top of culvert 2 feet B.

Road bridge No.84, on road leading to Swan's Ferry.

Road bridge No.85, at Crabb's ware-house.

Lock No.40 of 6 feet lift, $12\frac{1}{2}$ miles above Terre Haute, built on the framed plan described above.

Road bridge No.86 at Numa.

Culvert No.145 at Spring Creek, an arch of timber, 24 feet chord. Length from face to face of head walls, 86 feet; ring 18 inches deep. First courses on foundation extend beyond head wall on upper side, four feet holding down that extension of foundation. Top of arch 1.50 B., foundation 15 feet B.

Road bridge No.87, just above Otter Creek.

Otter Creek aqueduct,(No.13,) consists of 4 spans of 40 feet in the clear. The piers and abutments are built of timber, resting on a timber foundation, extending entirely across the bed of the creek. The foundation is 14 feet below the bottom of the canal; superstructure on same plan as Mill Creek.

Road bridge No.88, a short distance below Otter Creek.

Culvert No.146 at Lost Creek, consists of three spans 10 by $1\frac{1}{2}$ feet clear. Length 134 feet, top of culvert -- feet B.

Road bridge No.89 at Sasseen's.

Road bridge No.90, a quarter of a mile above Fort Harrison.

Culvert No.147 at Round Pond, consists of one space 10 by $1\frac{1}{2}$ feet clear; length 132 feet; top of culvert 13 feet B.

Road bridge No.91, at upper end of Terre Haute bluff.

Tow-path bridge at foot of basin, in Terre Haute.



Erie & Michigan

OLD NORTHPORT TAVERN

Rome City, IN

All that remains of the town of Northport is a cemetery and this tavern home. In 1838 Frenchman Francis Comparet of Fort Wayne laid out the town of Northport. A tannery, this tavern and two stores operated for a few years until overshadowed by Rome (Rome City) to the south -- another canal era dream town that just didn't quite make it.

Take IND 9 north out of Rome City and turn toward the Way College at the north end of the dam. Then take the bridge back over IND 9 on the county road. The tavern will be at the nearby crossroad on the northwest corner.



Wabash & Erie

THE GRONAUER LOCK DIGGINGS

New Haven, IN

In the hot days of August 1992, students from IPFW work to extract this bit of history from the path of construction nearby. This really is digging through the muck and the mire. Want to dig? We still have the north side to be completed by Oct 31. The Society is working with New Haven to develop a preservation plan. Mary Ann Getty is our representative on the Gronauer Lock Advisory Board established by New Haven city ordinance.

CANAL SOCIETY OF INDIANA

302 E. BERRY ST.

FORT WAYNE, IN 46802

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