SUPPLEMENT OF THE BEE.

NEW-ORLEANS, SATURDAY, JANUARY 11, 1834.

☞ *For accounts of the last European news see 4th page.*

STATE OF LOUISIANA:
ELEVENTH LEGISLATURE, SECOND SESSION

JOURNAL
OF THE
HOUSE OF REPRESENTATIVES.

Tuesday, December 24th, 1833.

The House met agreeably to adjournment.

On motion of Mr. V[illegible], of Lafayette, ordered, that from Friday next, leave of absence be granted to Mr. Beauvais.

On motion of Mr. Garland, ordered, that leave of absence for a few days be granted to Mr. Deballion, from Thursday last.

A message in writing from the Governor by Mr. Vernon, his Private Secretary, forwarding to the House the report of the Civil Engineer, together with the report of the Board of the Public Works, which are in the following words:

REPORT

Of the Civil Engineer of the State.

New-Orleans, Dec. 16, 1833.

The undersigned, civil engineer of the state of Louisiana, has the honor, in obedience to the act of April 24, 1832 "providing for the appointment of a civil engineer," of submitting the following report to the legislature:

My duties were prescribed by the board of public works in May 1st, and so soon thereafter as the necessary arrangements could be made and means procured, I began their execution. The existence of a devastating epidemic on the western waters left me, at that time, only the Florida parishes for a safe field of operations. I therefore proceeded to the examination of the rivers Falaya and Tangipaho. After the completion of this operation, I transported myself to East Feliciana, where I attended to the survey of the route for the rail road projected in that quarter. More time than I had expected was employed in this business both on account of the difficulties arising from the brokenness of the country, and because of the extraordinary sickliness of that district, which began in August, lasted to a late period, and spared but few. Nearly all my company fell sick at the same time, and I had to regret the loss of one of my assistants, L. B. Davis, a very promising young man.

Before resuming this operation, it became necessary to attend to the works at the mouth of the Bayou Plaquemine, where, unfortunately the water fell much later than usual. I addressed a report on this business to the sub-board of public works in October, and measures were taken to begin the work. This was done early in November under the management of Mr. H. Tuthill, the agent appointed by the board.

In pursuance to the instructions then transmitted to me, I directed my assistant Mr. D. N. Welch, to proceed immediately to the survey of the Atchafalaya, from which he has not yet returned.

From this succinct account it will easily appear, that complete reports on all the operations of the season could not have been made for the early session of this year, without suspending field operations during the month of November and beginning of December, probably the most valuable time of the whole year for surveys in this latitude and peculiar country.

The reports on completed operations are hereto annexed; the others will be transmitted without delay, after the return of the assistant engineer.

Though as yet, too imperfectly acquainted with the local and relative interests of the different districts of the state, to suggest any particular improvement, the information I have gathered during the past year, has forcibly impressed upon my mind the conviction, that few states require internal improvements so much, and, probably, none is as susceptible of them.

We possess the mart of a most extensive country; there every kind of produce, whether of the soil or of industry, is cheap, and can be brought down the Mississippi at a low rate of freight. These introduce likewise competitors from the distant ports. How can the planter withstand such odds against him, unless favored with an easy access to New Orleans! Only such places as possess this advantage can flourish; others must necessarily settle but slowly, labor under many inconveniences, and be confined in their industry to such productions only as can reach the market at suitable times and places. Variety and abundance are thus checked, and many enterprising planters can realize but slender rewards for their labor. Thus people living, it may be said, at the very gates of New-Orleans, are compelled to yield the prize to distant speculation. But let an easy intercourse be established, and every corner of Louisiana will be soon occupied; the resources of her rich soil rapidly developed, and she will, at least, be the first to enjoy the unparalleled advantages of her own prosperous market.

As regards the facility of making the necessary improvements and the certainty of their efficacy when completed, it will strike the most common observer. Over so flat a country, no formidable obstacle will be encountered, that would, as in a mountainous region, add to the time of transportation, or take from the efficacy of the power so much as to render the returns doubtful. Here the full effect of the power applied and the greatest allowable speed are rendered certain, by the generally level character of the land; and, consequently, every work judiciously conducted, must needs repay the state amply, both by the tolls which will accrue, in so fertile a country, with a denser population; and by what is far more important and valuable, as a state object, the increased wealth and prosperity of its territory.

In framing a general system of improvements, much difficulty will certainly arise concerning the leading objects most deserving of public patronage; not only an intimate knowledge of the country, its resources and relative interests is indispensable; but also, in many instances, the mind must read into the future, and anticipate those changes of circumstances, so common in this new country, which transfer the importance of existing places, to others perhaps wild and unknown. This is necessary in order that the expenditures may be judiciously bestowed upon lines of communication and works, likely to increase in interest, with the growth of the population and the general developement of the wealth of the land.

The most prominent feature which strikes the mind, while casting a general survey over the state, is the great stream to which it owes its birth and which must ever be the main artery of its trade. Capricious and uncontrolable, its power must be submitted to. The only modification it would admit of (and that is generally in anticipation of its mighty will) is the cutting off of some of its great bends. Such works I have frequently heard suggested. On ordinary rivers, they are always objectionable, on account of the reduction of depth, increase of the current and new bars, by which they ultimately rather injure than benefit the navigation. The immense depth of the Mississippi places it out of the reach of those objections. The only unfavorable consequences that can result from shortenings would be occasioned mainly by the peculiarly light and friable character of its banks.

A *Cut-off*, as it is generally termed, will, of course, produce an acceleration of the velocity of the current and consequently the destruction of marginal property on the side against which it will infringe, below the new channel. For, the bends of a river cannot be considered as the work of chance; they are necessary to its *regime*; that is, to a proper equilibrium between the velocity of the current and the tenacity of its banks and bottom; and these must necessarily wear away until by increased distance, the speed is reduced to its proper standard. Thus the consequence of a cut-off will be, that in the end, a new bend, nearly equivalent to the former, will be made by abrasion on one side and a corresponding *batture* on the other; the higher and better ground of the two having been carried away, and consequently higher levees becoming necessary. This result though it may sometimes be very slow, is nevertheless certain; what weight may be given to this consideration along the Mississippi is difficult to establish.

As regards the opinion that cut-offs will cause the stream to dwell more below them and require higher levees, I cannot but deem it erroneous. At the place of the cut itself there must consequently be an increase of velocity and consequent sinking of the surface; but, throughout the channel below, a little reflection must convince, that the same quantity of water being received from above, there cannot be an increase of the section. Only the stream will rise faster, but even that, not to a perceptible extent.

The next consideration which presents itself, has reference to the lateral works, by which a communication may be opened from each point with the Mississippi; and the expediency of a uniform mode of conveyance naturally suggests canals as harmonizing better with the interior channels and lakes, so abundant in the state. Unfortunately this principle of expediency is not every where applicable. Between the navigable waters of the interior, no doubt can exist as to the preference to be given to canals, even at a reasonable addition of cost; no doubt likewise than, in the lower part of the Mississippi where its rise is moderate, canals will be found, not only advantageous, but from the very nature of the soil, frequently the only practicable mode of improvement.

But where it rises as much as 30 feet and its banks are high in proportion, the opening of canals becomes almost impracticable. The descent of the country, being from the banks of the Mississippi towards the interior, contrary to what occurs elsewhere, the summits of works that canals would require, would have to resist the whole pressure of the stream; and their existence in an alluvial soil, must be very precarious; while their cost and that of the excavation must be greatly enhanced by the enormous height of the banks, the immense quantity of large logs and stumps generally found under the surface, and the necessity of digging in water. In such situations rail roads necessarily must evidently be preferred to canals. This will generally be the case above the neighborhood of New-Orleans.

These considerations give additional importance to rail roads in Louisiana. I say rail roads; because, for the general purposes of trade, common roads are too often impassable in this low and level country, and turnpikes require materials too far removed to be obtained at a cost less than that of rail roads.

The invention and late surprising improvements of this mode of intercommunication may, therefore, be pronounced with sound propriety, a most fortunate event as regards the welfare of Louisiana, to which rail roads will be almost naturally adopted; and, without the gift of prophecy, it may be safely asserted, that they will intersect it in every direction, in lieu of turnpikes and diffuse over its surface life and prosperity.

Among the rail roads of vital interest, I do not hesitate to place one; towards which I consider my operations of last season as having made a beginning; I mean a great line from the Mississippi towards Washington city, which, leaving the river at a suitable point, should take its direction through Mississippi and Alabama, towards the Southernmost bend of the Tennessee river, and thence along the great valley of the Tennessee through the state of that name, and then through Virginia.

My examinations while engineer to the latter state, have informed me that the route across the mountains is most remarkably practicable, and although many others passing over the Allegheny mountains have been mentioned, I doubt whether any of them will be seriously undertaken when costs and profits are carefully considered in relation to each other. The route I mention affords long slopes along the valleys of water-courses by which the mountains can be ascended imperceptibly at grades within the scope of locomotives and I entertain a most positive conviction that this is the only track possessed of this most important facility. I need not enlarge on its advantages; the fact alone, that it would both increase and secure the cotton and other products of Mississippi and Alabama is alone sufficient to recommend it.

The route which I have heard spoken of through all the Atlantic states would be far from possessing equal advantages: for, although passing through a lower country, it would have to cross innumerable streams at great cost, and its graduation would consist of a succession of ascents and descents across all the ridges dividing those streams. As regards its utility, it would subserve the travelling interest, but only in a limited degree the purposes of trade, especially for Louisiana.

It cannot be expected that the route I have mentioned could at once be actively favored by those states through which it would pass: local interests would undoubtedly cause frequent divergencies, all, however, to the ultimate advantage of the main stem. But let Louisiana advance with its own section of it to a well chosen point on its northern limits, and no one could doubt but that, in a very short time the state of Mississippi will extend it, by successive enterprizes from place to place, until it shall reach Alabama, where the small gradual steps will carry it forward. And furthermore, those states can hardly think of it, until Louisiana shall offer them the inducement of its own section terminating at an eligible point on the Mississippi, without which the undertaking on their part would be most unprofitable in that direction, and they must naturally aim for the most eligible route towards the Mississippi in their own territory.— Should they do it, before any rail road is made in the Felicianas, a conflicting interest being thus created, the intended rail road in that quarter must prove to be a secondary undertaking. I need not add here that projects of this nature have been before the public for some time past in Mississippi. Upon every consideration, therefore, of policy and interest, it behoves Louisiana to take the initiative.

It is this view of the subject which, in my mind, gives importance to the Clinton and Port Hudson rail road, of which I shall now proceed to give the outlines, and which I would consider of little value, if not extended to the Mississippi line.

THE CLINTON AND PORT HUDSON RAIL ROAD.

The distance between the two points was ascertained to be 20 miles and 120 poles on a straight line bearing S. 13 1-2 W., but the unevenness of the country does not allow of a near approach to that course, without an enormous expense and a sacrifice of a great share of the utility of the road. For, as the grades could not be materially reduced by cutting, owing to the generally wet and spongious character of the soil, and the many small bayous which cut it up, they must necessarily remain high in many places. Near Clinton, for example, after having crossed the Comite, the hill rises about 70 feet in half a mile, and this elevation could hardly by reduced by deep cutting.

After diligently exploring the country, I became convinced that we must necessarily follow the Comite bottoms some few miles, in order to pass over the ridge which divides it from Redwood creek at a low point and grade; this made a deflection of 4 miles towards the south inevitable. Beyond Redwood, there is no further difficulty as regards the regulating of the grades.

The route which I consider most eligible will keep by a number of straight lines, within a short distance of the present country roads. The lines will be as follows:

1st, [illegible]	S. 13 W.	2 miles [illegible] poles
2d,	S. 71 1-2 W.	[illegible]
3d,	S. 24 1-2 W.	[illegible]
4th,	S. [illegible] 1-2 W.	10 [illegible]
5th, to the foot of the bluff at Port Hudson,	S. 74 1-2 W.	2 [illegible]
Total distance,		22 miles [illegible] poles

The last course S. 74 1-2 W. will be the direction of the Main street of Port Hudson. The 1st line begins at a point in the road at the foot of the hill below Clinton, with a view to its farther extension towards the State of Mississippi, and also because its rise into, and passage through, Clinton would be attended with considerable inconvenience.

The whole distance, it will be observed, will be only one mile and 208 poles greater than the straight line.

The Comite will be crossed at a favorable bend 2 1-4 miles from Clinton, and Redwood creek at 10 miles 280 poles from the same, and about half a mile above the bridge on the present road. It is near this point that the greatest deflection from the straight line is made.

The highest grade will not be quite as much as 20 feet to the mile, and only at one place and for so short a distance, that the impetus alone of the train would be sufficient to carry it up.

Beyond Redwood, the route traverses a champaign country, but slightly undulated, known by the name of the *Plains*, and which contains the almost imperceptible ridge, which separates the waters of the Mississippi from the tributaries of lake Pontchartrain, and dies away not far from Baton Rouge.

This fact suggests naturally the idea of a branch towards that place, especially when it is considered that the great deflection near Redwood brings the road within a distance of Baton Rouge, which cannot, I think exceed 14 miles in a straight line and that the level ridge just mentioned could be pursued almost all the way.

As regards the branch towards Jackson, it would be about 8 miles long and should strike the route above mentioned near Redwood; unless a distinct and separate improvement diverging from the *Plains* was deemed more expedient.

The following are some of the altitudes obtained by the level, and all referred to high water mark at Port Hudson, the low water line could not be observed.

Top of the bluff at Port Hudson,	61	feet.
Highest point in the Plains,	100	"
Bank of Black creek,	92	"
Bank of Redwood, 2 1-2 miles above bridge	97	"
Bank of Redwood, on the levee 2 1-2 above the same,	86	"
Bank of Redwood, at the bridge,	82	"
Foot of the hill at Clinton,	115	"
Comite bank at bridge near Clinton,	134	"
do. on the old St. Helena road,	130	"
do. at the crossing,	12[illegible]	"
Bottom of do. at Rattlesnake bayou	160	"
Highest point of the ridge near Redwood, where crossed by the line,	176	"

The map and profiles, prepared from the notes, will shew the relative situation of all the points and all the circumstances of the proposed route.

The rail road must, of course, be constructed altogether of timber, capped with bars of iron as usual. Owing to the objections to deep cuts and the consequent want of materials for embankments, as much as the known economy of the plan, its superstructure will generally have to be supported upon piles.

A road of this description will, I think, approximate a cost of $8,000 per mile, or very nearly $176,000 in the aggregate: a sum, the expenditure of which will be amply repaid by the returns such an improvement must yield, when carried into Mississippi, the extreme section of a long line of communication being, it is well known, always the most profitable. But, I repeat it, the work should be undertaken solely with a view to its extension to the limit of the state, and an expectation of its being prolonged by the next.

THE BAYOU PLAQUEMINE.

I cannot do better than to annex here, my report to the sub-board of public works concerning the incipient measures taken towards the works at the mouth of this bayou.

In consequence of the report alluded to, the sub-board appointed Mr. H. Tuthill agent for the construction of the works recommended in said report; he began the erection of the embankment across the canal in November, towards the end of which month I visited the place. The agent was then pushing the work with great activity and intelligence.

I left directions with him for opening a channel through the drift wood at the mouth of the old bayou and securing the head of the island, and felt confident that, unless the Mississippi should rise earlier than usual, the measures we have taken will preserve the village and secure the navigation for this winter. In order to render the result more certain, the board of public works, have at their last meeting increased the force employed under the direction of Mr. [illegible] Baker, whose ability is well known.

As regards the [illegible] by which the mouth of the bayou is [illegible] obstructed, against the introduction of [illegible] timber, I am confirmed in the opinion expressed in my report to the sub-board, that it would be unsafe to undertake it this fall. A part of the mass of drift wood, must be [illegible] properly secured to answer the purpose of a pier this winter. [illegible] the drift will be easily obtained. [illegible] besides [illegible] result of the [illegible] should effectually [illegible] most [illegible] might [illegible].

RIVER FALAYA.

The examination of this river as far as Covington, I conceived to have been directed to, chiefly with a view to the extension of steamboat navigation up to that little town; for, small schooners do now reach it; indeed steamboats themselves, with some labor, might get there likewise. However, they now stop at a landing from 1 1-2 to 2 miles below Covington.

The distance by water, from the landing to Covington, is about 3 miles. The greatest difficulty, [illegible] distance, is the contracted width of the river, which is rendered still more inconvenient by its crookedness, and the large trees which overhang the channel; a few logs are also occasionally met with.

Up to the landing, nothing can be done that the steamboat owners would not do themselves if it was of consequence to them. The few snags which are met with are no impediment in their way.

Between the landing and Covington, there is only one bend that I should think it expedient to cut through; it is the first below the [illegible]; this could be effected at a slight cost, by clearing away the standing timber, and opening a small trench; the next rise would finish the work. In a shallow, and sandy river, such shortenings should be but sparingly resorted to, as they are apt to produce shallow water, new bars, and frequently rather injure ultimately the navigation, than benefit it; besides the want of permanency of channels so modified.

The removal of a few snags and trimming of the trees and limbs, growing along the bank, in the way of the channel of steamboats, will complete the improvement. The whole work will be light and may be made for, between three and four hundred dollars.

THE TANGIPAHO.

Though my instructions did not require an examination higher up than the Chapoupilas, having procured a boat eight miles above it, I had an opportunity of viewing that additional distance. It is swift, much obstructed by timber, and very crooked, but affords as much water as the river just below. Its crookedness will ever render unfit for the navigation of large crafts, and straightening the bends is liable to the objections I have already mentioned; the necessity of such bends, to regulate the current and bring it to a standard of equilibrium with the tenacity of the soil, will cause on a river straightened by art, ever changing channels and the falling in of one bank, with the formation of bars on the opposite side.

The water was said to be very low in the Tangipaho at the time of my examination. It is a fine clear stream, the borders of which promise to be lined with handsome residences. Excellent building timber grows near it and is floated down to the lake. The vicinity of New-Orleans gives to this, otherwise poor section, a character of richness which it derives from the growth of the pine timber, for which there is always ready market at hand. To facilitate the access of steamboats and crafts, to the settlements that are daily made on this stream is consequently a desirable object. The following is an account of the observations I have made to this end, on each successive mile; the distances were merely computed; an actual survey would have been supererogatory.

1st mile below the Chapoupilas—in one place only 2 feet water and in another every where else 4 feet and upwards, 2 1-2 might be obtained all along. For removing trees, trimming banks, &c.	$15
2d mile—3 shallows only 1 1-2 feet deep, will be deepened when logs are removed—probable cost	200
3d mile—one shallow place occurs in it only 2 1-2 feet deep, and also a great bend, which may be cut thro' by calling to our aid the stream itself, which will require only the grubbing away of the standing timber on the new channel—though such cut-offs are generally objectionable, this, as well as others that will be mentioned below, will come in anticipation of what will happen sooner or later. The cost for this mile may be	250
4th mile—swift water, two bends may be cut through; in doing which, the cut should as much as possible be directed, as a general rule, in the line of the current below. The water is 3 feet deep at the least. For improving this mile	250
5th mile—at one place, only 2 1-2 feet of water. At a bend, which will soon be cut through, the stream may be assisted. Probable cost of improving this mile	200
6th mile—good water; some drift to be removed, cost	50
7th mile—swift, but crooked current; many places only 3 feet deep; the depth could not be increased much. Timber to be removed, probable cost,	200
8th mile—nowhere less than three feet deep; for removing timber, trimming banks, &c.	150
9th mile—at two places only 2 feet deep; will deepen to 3 feet by the removal of the drift. There is in this mile a cut off which does not widen and should be assisted; probable cost of this mile,	300
10th mile—the [illegible] continues; some places only 3 feet deep; cost of this mile	250
11th mile—Occasionally only 3 feet deep; a cut-off at a short turn is indispensable; probable cost of cut-off and other works,	300
12th mile—water at least 4 feet deep; for removing timber and trimming banks,	100
13th mile and 14th—water at least 5 feet deep; for improvements,	150
15th mile—the beginning of this mile is torn up by the stream and many small islands formed, three very sharp turns; the cost of an improved channel,	1,100
The 16th up to Mr Warner's saw mill,	[illegible]
16th to 20th mile—Good water, generally at least 5 feet deep; the river is very crooked; for removing logs and trimming banks,	100
20th to 30th mile—down to the mouth; the distance is through low cypress land, the water is deep, and but little is required to add facilities to the navigation, which is already practicable for steamboats. The removal of a few logs at the beginning, a cut-off of but a few yards in length, and some trimming of overhanging trees and limbs will be sufficient: all of which can be done for	500
Total amount,	$4,595
Add for superintendence and contingencies 30 per cent,	1,365
And the probable cost of the improvement will be	$5,915
Say $6,000.	

At the beginning of the last section, the water is very devious; but, as it is also wide, steamboats can turn with tolerable facility; here, cut-offs to straighten the channel are free from the objections against such works in a living current, but liable to one of an entirely different character: while the current is not strong enough to move sand, form bars and alter channels, it is likewise too weak to be used as an assistant in forming cuts across bends; hence, the land being low and swampy, the whole width of the excavation must be the result of labor performed in water, either by hand or mechanical means, among cypress roots and stumps, which would occasion so incommensurate an expense as to deter from the very thought of such an undertaking.

To resume: steamboats drawing less than 5 feet of water can now ascend up to Warner's saw-mill; and an attempt to increase this depth would be useless, on account of the bar at the mouth of the Tangipaho, in the lake, where the depth could not be made greater by any means.

Up to the end of the 12th mile 5 feet of water can be maintained.

Above this 3 feet for some distance, and then only 2 1-2 can be depended on at all seasons; and steamboats will be, only occasionally, able to ascend so high; and this, even, with some difficulty, owing to the crookedness of the stream: but the navigation may be advantageously improved for crafts of light draft, at the above cost, which will appear moderate, and is, in a great measure, rendered so by what has been already done by private exertions.

All of which is respectfully submitted.

C. CROZET,
Engineer of Louisiana.