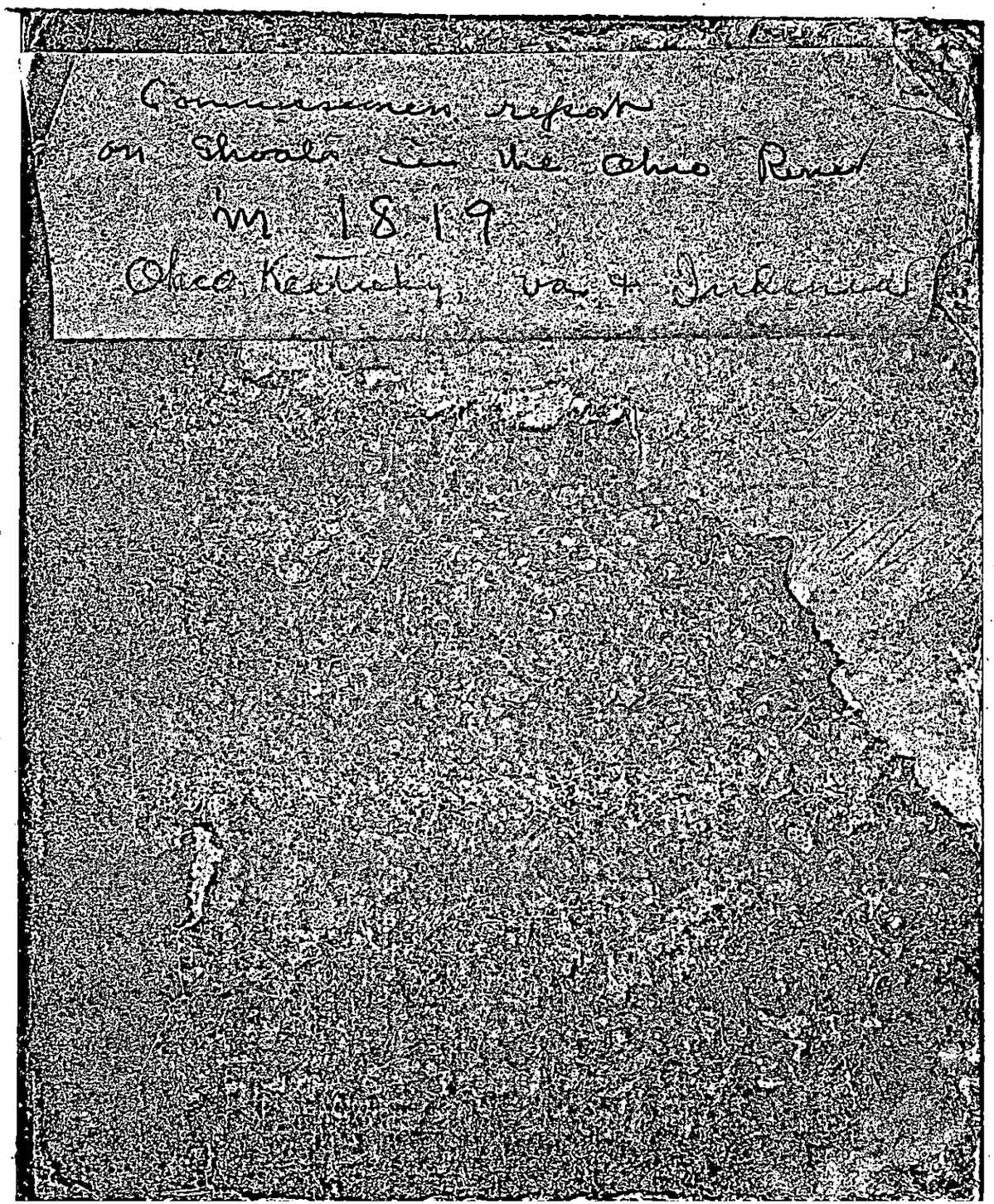


PRINTED WITH STATE FUNDS

The Commissioners appointed by the States of Virginia Kentucky, Pennsylvania and Ohio to examine the obstructions in the navigation of the Ohio River as contemplated by a resolution of the State of Ohio of the 27th January 1817. having performed that service respectfully submit the following report.

In the early part of February last a correspondence was commenced between the Commissioners for fixing the proper time of meeting. This correspondence resulted in designating the first Monday in August for that purpose; at which time the Commissioners from Virginia Ohio & Pennsylvania met at the city of Pittsburgh. Unfortunately the Commissioners on the part of Kentucky never did receive notice of this appointment in time to aid in the examination. But from his knowledge of the Ohio river generally and of the falls opposite Louisville in particular and from the facts collected by

by the calamities and unable to join in the present report.

From the State of Indiana which was embraced by the original resolutions of the State of Ohio no information has been received, and it is not known to any of the Commissioners whether that state has acceded to the proposition.—

On meeting at Pittsburgh the Commissioners after examining and comparing the instructions from their respective governments were clearly of opinion that altho there were but three of them present it was their duty to proceed with the examination.

On considering the resolution of the State of Ohio—to which those of the other states referred the Commissioners found that it was expressed in very general terms and much left for construction. Thus situated they were anxious whilst they avoided every thing involving unnecessary expense not to omit any preparations or examination calculated to carry into effect the enlightened views of their respective states.

Altho in the opinion of the Commissioners it would have been desirable to have taken a survey of the whole river and to have ascertained the fall in every mile yet neither the letter nor the spirit of their instructions authorised this procedure.— Their attention was therefore confined on making an efficient practical and scientific examination of the different obstructions. These generally consist in rocks sand and gravel bars, and are always located at the different falls, or rapids; tho in some places there are rapids which present no impediment to the navigation other than the force of the water. It was therefore determined to take a survey of each obstruction— to ascertain by actual soundings the depth of water under six feet— on each shoal and the whole fall from the commencement of the rapid to its termination.

For the assistance of the Commissioners in an examination thus varied it became necessary to employ a Surveyor

a Surveyor and to procure a boat and tender with the necessary Pilot Chain carrier & boatmen. In pursuance of this determination Magnus M. Murray Esqr was appointed Surveyor & the Commissioners have rendered themselves of the present opportunity to state that he discharged the duties of his appointment to their entire satisfaction—

Whilst relating their proceedings in making the necessary arrangements the Commissioners take great pleasure in noticing the prompt and efficient assistance they received from the Corporation of the City of Pittsburgh. At a special meeting of the Select & Common Councils a joint Committee was appointed with instructions to procure a suitable boat or boats and the necessary stores; and also to tender to the Commissioners the use of any Mathematical instruments belonging to the City which might be thought necessary. In pursuance of this resolution the committee procured and placed at the disposition of the Commissioners a large and suitable Boat properly fitted up and furnished with necessary stores. The purchase of these articles the Committee expended Seven hundred & twenty two dollars & sixty four Cents which sum in the opinion of the Commissioners ought to be repaid to them in equal proportions by the respective states after deducting One hundred and twenty three dollars the amount for which the boats and furniture sold when the examination was finished. This attention of the City Councils whilst it forwarded the Commissioners in their proceedings and put them in possession of some instruments difficult to be procured but indispensibly necessary was also acceptable to them in another respect, as neither of the Commissioners had received any Pecuniary advances from their respective states.

In making a detailed and particular report of the impediments to the navigation the Commissioners refer to the drafts and plats herewith

exhibited

[illegible] The views and facts there stated it is deemed unnecessary to embody in any other form —

On considering the impediments to the navigation of the Ohio River generally it will be seen that they consist principally in bars formed of gravel, and bars formed of sand and gravel. Solid ledges of rocks are however found in some places extending across the bed of the river: ~~and~~ presenting impediments difficult and expensive in their removal. Detached rocks are scattered in every part of the river forming very serious impediments, to the descending navigation; but these are insulated & in general not attached to the bottom. Hence altho' their number is considerable it is not anticipated that the expense of their removal will be great.

Logs, and in many instances whole trees with their roots and branches, sunk and lying on the bottom, are also numerous. These tho' sometimes presenting no obstruction, are frequently dangerous, and great care is necessary in avoiding them. It is however believed that with the application of machinery of sufficient power, all that are dangerous can be removed at an expense comparatively small.

The sand and gravel bars, being the most serious as well as the most numerous obstructions to the navigation, the best mode of removing them, and the probable expense, has exercised much of the attention of the Commissioners. In speaking of the improvement of the river generally they have no difficulty in expressing their decided judgment that the obstructions can be removed, or overcome; and that the navigation of the whole river can be rendered safe and certain, at the lowest stages of water for vessels of sufficient burden, & that at a less expense than is generally supposed; — but whether these improvements will be best effected by cutting a channel through the bar or by raising wing dams — or whether — Channel

channel & many dams may not allbe necessary to overcome the same impediment can only be ascertained by experiment.

The Commissioners deem it superfluous to offer any arguments to shew the advantages that would result from the improvement of the navigation of this noble stream. Were any wanted it would only be necessary to advert to the loss of property occasioned by the wreck of descending boats; to the painful spectacle of steam boats barges & even vessels of any burden, locked up for the want of sufficient depth of water — many of them lying on the bars some of them in a rotted state of preservation, & numbers going rapidly to decay, whilst through a populous region of 1000 miles in extent the commerce and interchange of domestic commodities are completely embargoed.

In a table accompanying this report the different obstructions are placed in four classes. By this table it will appear that in the first class there are eight shoals, on which the depth of water at the lowest point in each is from two feet four inches to two feet six inches — In the second class there are twenty four between two feet six inches & three feet. In the third class there are fourteen between three feet & three feet six inches — In the fourth class there are twenty two between three feet six inches and four feet. And in the fifth class are thirty five between four feet & six feet — It is necessary however to observe that this classification is made with reference to the depth only; and that some obstructions placed in the lower classes will be removed with much less expense than some others which have more depth of water. By a reference to the drafts it will be seen that some of the bars tho' shallow are not of any great extent.

The facts exhibited by this table sufficiently indicate the obstructions which should be first removed.

assigned Upon a full & careful examination are clearly of opinion that a canal & locks round the Falls is the only mode by which a safe and convenient passage can be procured for vessels drawing six feet water at all seasons of the year. To attempt an opening in the bed of the river thro the rock of sufficient breadth & depth to afford a sluice or channel of six feet water would be a work of much difficulty great expense, uncertain in its duration, as the labor could only be performed at low water, and at last doubtful as to its consequences and utility. Believing then that the great object of a safe and certain navigation at all seasons can only be obtained by means of a canal & locks the Commissioners have caused an accurate survey to be made of the river from the head of the falls to the foot a drawing of which together with that of the sites contemplated for canals on each side of the river will be found accompanying

accompanying this report.

The estimate of the expense of each canal as calculated by Mr. Baldwin on the Kentucky side and by Mr. Flint on the Indiana side adding to Mr. Baldwins calculation two feet of depth in the rock and twelve in breadth and to Mr. Flints two feet depth, is as follows

On the Kentucky side

465 Perches in length
width at bottom 40 feet
Depth of water at the lowest stage 6 feet
Average depth of Clay to be removed 14 feet
Do. Do. Rock to be removed 8½ feet

Excavation of Clay 214.840 cubic yards at 30 cts.		$64,452.
Do — Rock 96.616⅔ cubic yards @ $1.50		144.925
Locks Iron, tools Mason wages wing walls &c		90.000
		Carried

the canal will be most used a somewhat difficult and dangerous passage, which may be avoided by the canal on the Kentucky side. But as the junction of the canal with the river as contemplated by Mr. Baldwin is above the lower point of these dangers the Commissioners are of opinion that it will be found expedient to change the route and enter the river lower down, this will add to the length of the canal and consequently to the aggregate expense for excavations on the lower part. Additional expense will also be incurred in clearing the bed of the river from the basin to the mouth of the canal. For the expense of these two items say $50.000; this will make the whole expense of the Canal on the Kentucky side $380.594.

As a full examination of the sites on each side of the river the Commissioners are clearly of opinion that the work is practicable on either side and that either canal can be made perfectly secure from freshets at any stage of water. But from the estimates of expense, and the junctions of the different canals with the river, the Commissioners are unanimous in giving a decided preference to the Kentucky side.

Gallipolis Ohio Nov 2d 1819

S Blackburn

John Adair

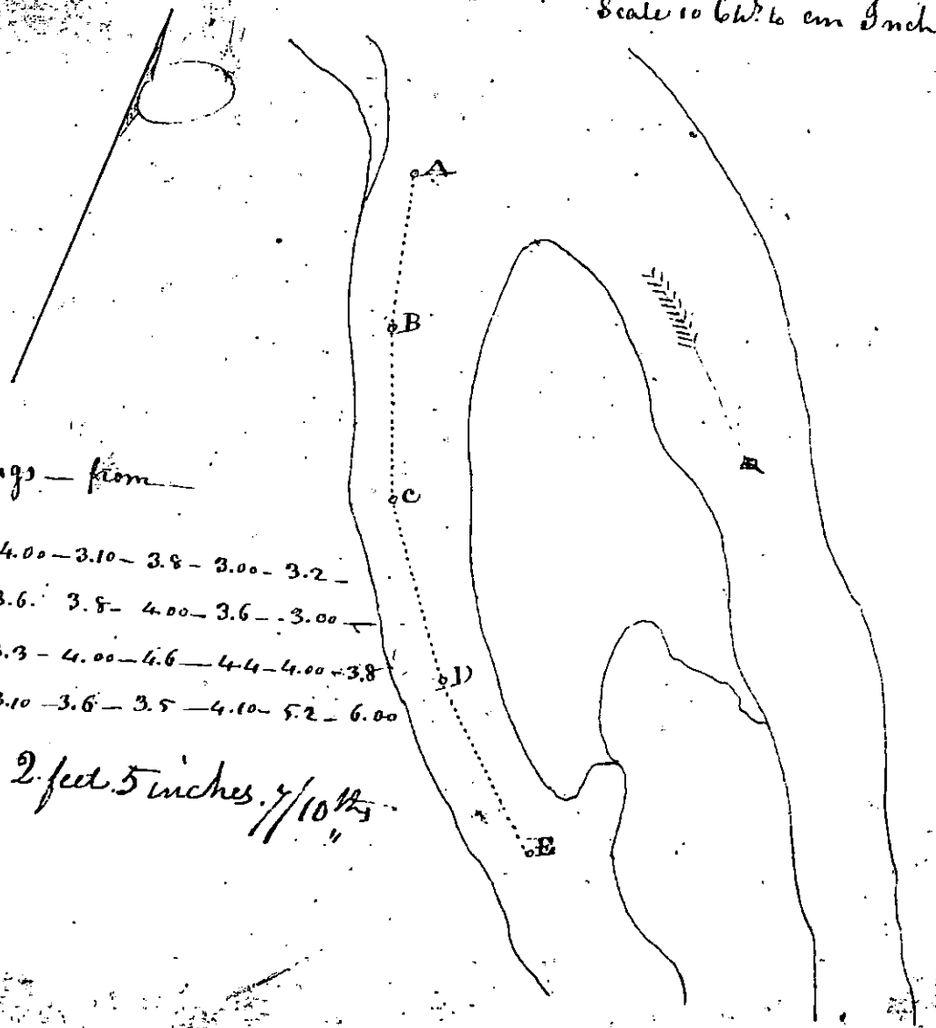
Edw. W. Tupper

Walter Lowrie

200 Copies to be printed this forenoon

Shoal N° 1 — Head of Brunot's Island —

Scale 10 Chs to an Inch



Soundings — from —

A to B. 4.00 — 3.10 — 3.8 — 3.00 — 3.2 —

B to C - 3.6. 3.8 — 4.00 — 3.6 — 3.00 —

C to D - 3.3 — 4.00 — 4.6 — 4.4 — 4.00 — 3.8

D to E - 3.10 — 3.6 — 3.5 — 4.10 — 5.2 — 6.00

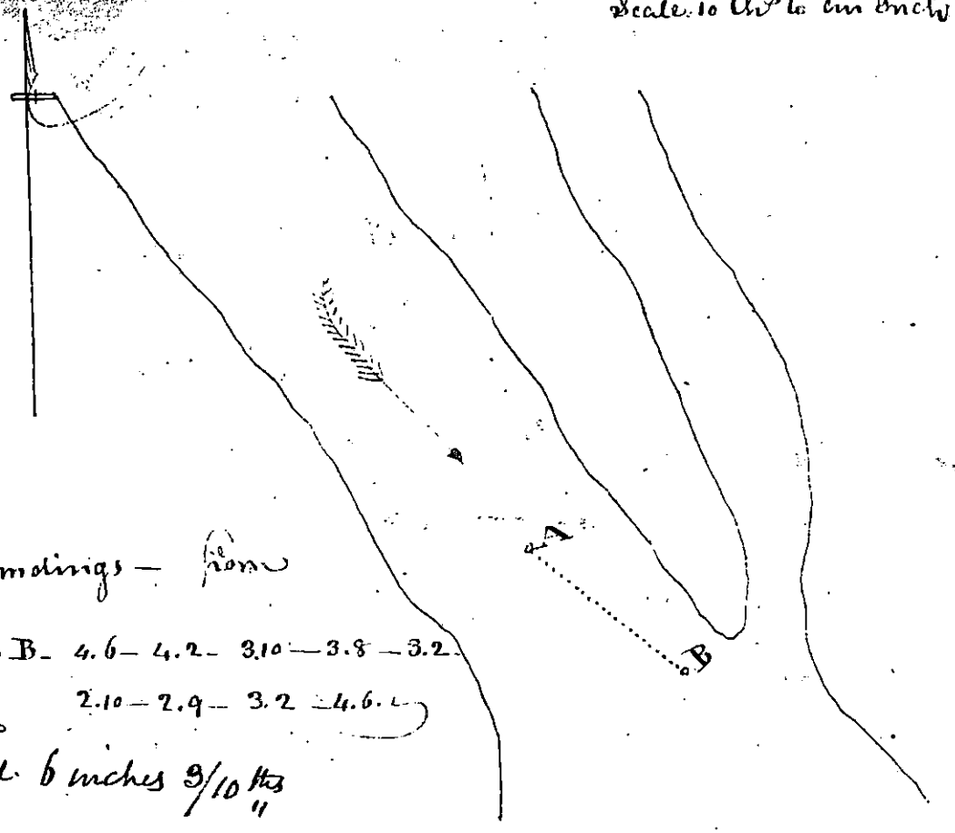
Fall 2 feet 5 inches 7/10 Hs

Remarks

This Shoal is about two miles below Pittsburgh at the head of Brunot's Island — the Bar forming the Obstruction is entirely gravel, there are neither logs or rocks in or near the Channel.

Shoal No 2 Foot of Burnets Island

Scale 10 Ch^s to an Inch



Soundings — from

A to B — 4.6 — 4.2 — 3.10 — 3.8 — 3.2 —
2.10 — 2.9 — 3.2 — 4.6.

Fall 6 inches 9/10 ths
11

Remarks

This Shoal lies at the foot of Burnets Island 22 Miles below Pittsburgh — There are Several logs in and near the Channel at the lower point of this Island; There is Some appearance of Rapids & the current not rapid

Shoal № 3 — Horse tail Ripple —

Scale 10 Ch.s to an Inch

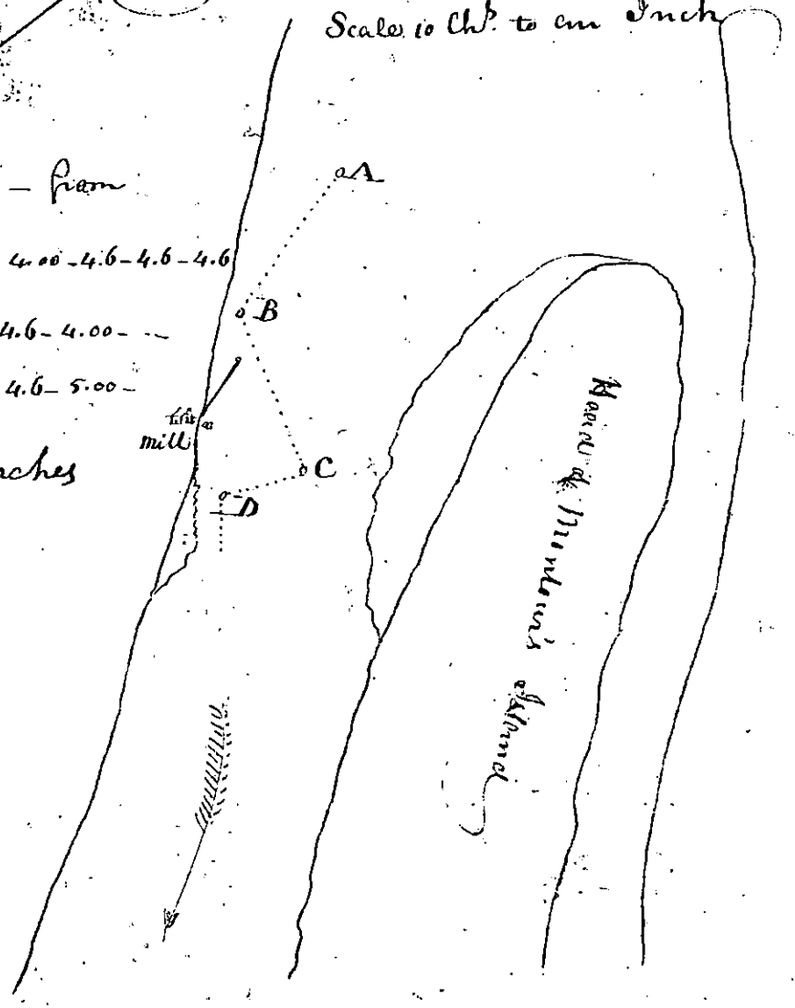
Soundings — from

A to B — 4.6 — 4.2 — 4.00 — 4.6 — 4.6 — 4.6
4.6 —

B to C — 4.00 — 3.6 — 4.6 — 4.00 — —

C to D 4.00 — 4.2 — 4.6 — 5.00 —

Fall 4 feet 3 inches



Remarks.

This Shoal is 4 miles below Pittsburgh, and may be classed among the most dangerous & difficult obstructions. The bar is formed of rocks ~~and~~ small stones & gravel. The water fall over the bar is very rapid — There has been erected a Mill dam on the bar projecting 30 feet into the river which has entirely changed the Channel.

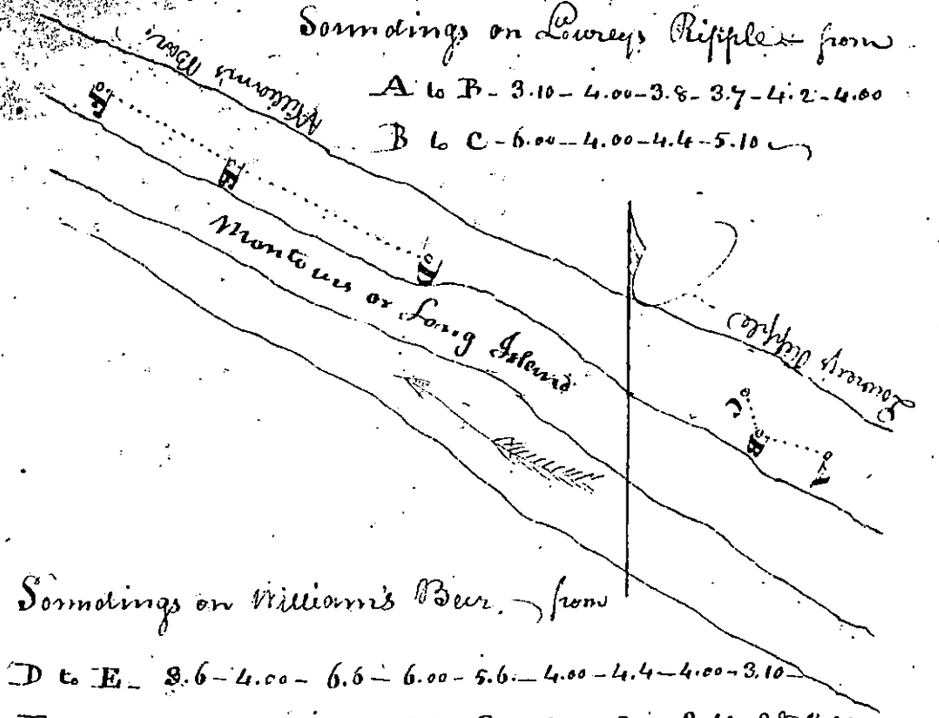
Note No 4 — Lowrey's Ripple & Williams Bar.

Scale 20 Chs to an Inch —

Soundings on Lowreys Ripple — from

A to B — 3.10 — 4.00 — 3.8 — 3.7 — 4.2 — 4.00

B to C — 6.00 — 4.00 — 4.4 — 5.10



Soundings on Williams Bar — from

D to E — 3.6 — 4.00 — 6.6 — 6.00 — 5.6 — 4.00 — 4.4 — 4.00 — 3.10

E to F — 4.4 — 3.10 — 3.8 — 3.5 — 3.00 — 2.10 — 2.9 — 2.10 — 2.8 — 3.00 —

3.4 — 3.10 — 4.00 — 4.6 — 4.8 —

Fall, 3 feet 6 inches

Remarks.

These obstructions are occasioned by two bars, crossing the river, at about ½ Mile from A is a smooth rock. at B the bottom is rock & gravel — There are a number of rocks on this bar in and near the Channel: the lower bar is also formed of rock and gravel.

Canal No 5 - Merrymans Bar - White's Bar & Woolery's Trap -

Soundings - from -

A to B - 4.6 - 4.00 - 3.6 - 3.6 - 3.3 - 3.6 - 3.4 - 3.5 - 3.7 - 3.8 - 3.6 - 7.00

B to F Deep water. -

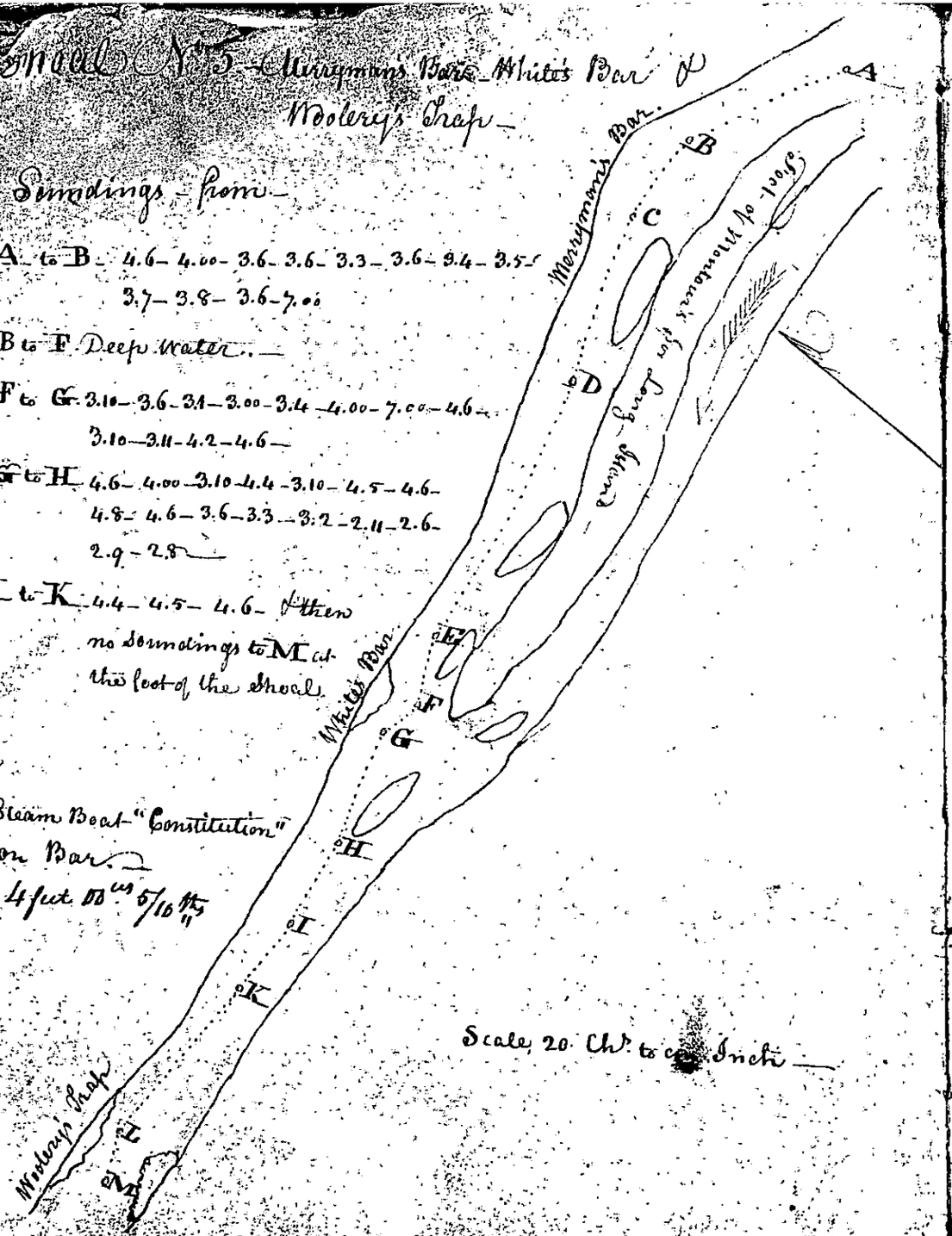
F to G - 3.10 - 3.6 - 3.1 - 3.00 - 3.4 - 4.00 - 7.00 - 4.6 - 3.10 - 3.11 - 4.2 - 4.6 -

G to H - 4.6 - 4.00 - 3.10 - 4.4 - 3.10 - 4.5 - 4.6 - 4.8 - 4.6 - 3.6 - 3.3 - 3.2 - 2.11 - 2.6 - 2.9 - 2.8

H to K - 4.4 - 4.5 - 4.6 - Then no soundings to M at the foot of the shoals

I. Steam Boat - "Constitution" on Bar -

Fall 4 feet 08 ins 5/10 ths 11

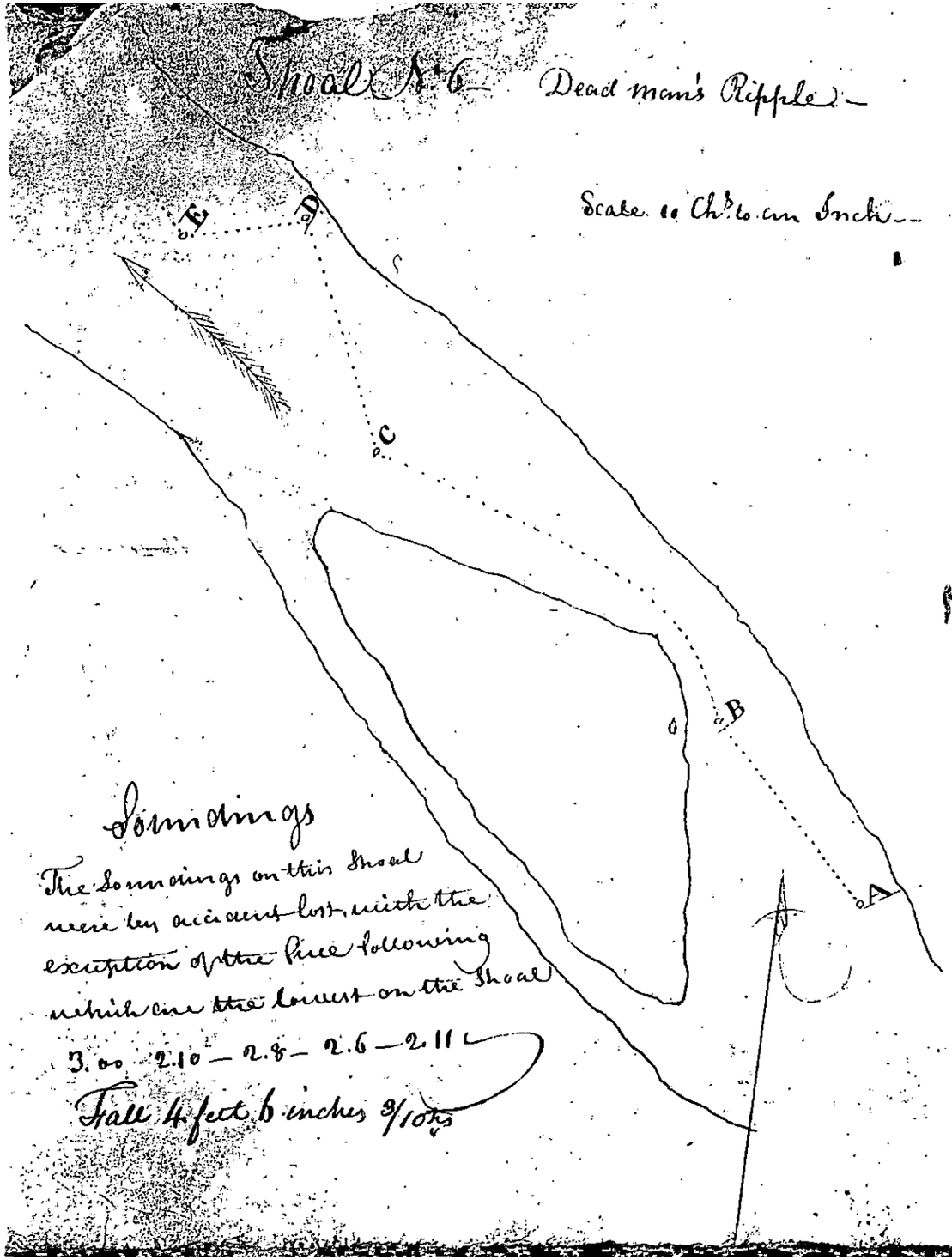


Remarks.

These Shoals commence about Seven miles below Pittsburgh. They are occasioned by three distinct beds, cropping the river. The ~~Steam~~ Steam Boat "Constitution", is aground on the Merrymans bar. These are formed of gravel, except Woolery's trap, which is stone and gravel.

Shoal No 6 — Dead man's Ripple —

Scale 10 Ch^s to an Inch —



Soundings

The Soundings on this Shoal were by accident lost, with the exception of the five following which are the lowest on the Shoal

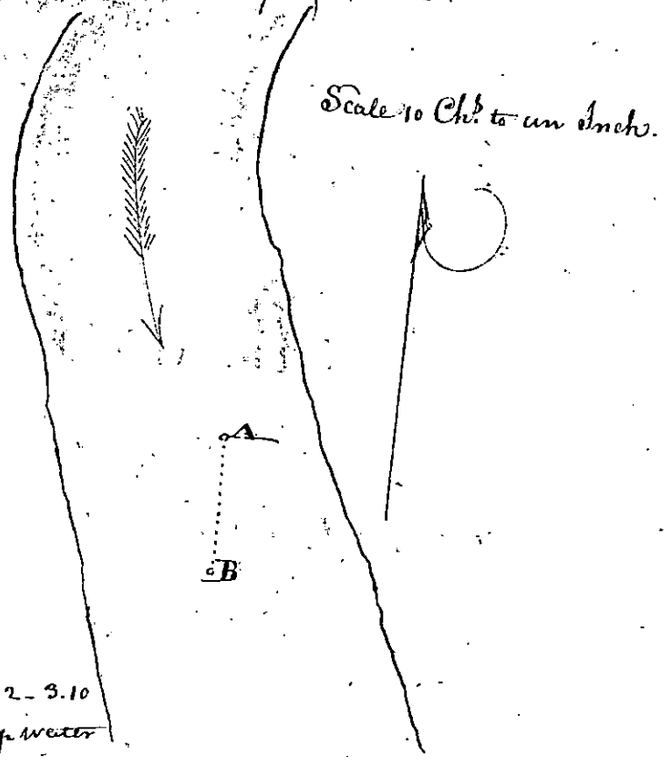
3.00 — 2.10 — 2.8 — 2.6 — 2.11

Fall 4 feet 6 inches 3/10ths

Remarks

This Shoal is 15 miles below Pittsburgh the Steam Boat "Massachusetts" lies aground on the bar — There are a few snags appear near the Channel, and the bar is composed of rocks and gravel, the water flows with much rapidity over this bar. This may be considered as a very serious obstruction

Ohio Shoal No. 7 — Sewickley Bar. —



Scale 10 Chs to an Inch.

Soundings from

A — to B. 4.6 — 4.4 — 4.6 — 3.2 — 3.10
4.00 — 4.2 — to deep water
at B.

Fall 4. inches 5/10ths

Remarks —

This Shoal is about 17 miles below Pittsburgh The fall of water on this bar is inconsiderable but there are a number of stone which occasion breakers in or near the Channel. The Shoal may be considered as composed of stone and gravel. —

Shoal No 8

Logstown Bar.

Scale 10 Chs to an Inch

Soundings — from

A to B. 4.2 – 3.9 – 3.10 – 2.11 – 2.10 – 2.8 – 2.6 – 2.5

B & C 2.6 – 2.8 – 3.7 – 3.8 – 3.10 – 3.00 – 3.2 – 3.4 – 3.8 – 4.00 – 4.4 – 4.9 – 5.00 – 5.4 – 5.8

C to D – 4.4 – 4.6 – 4.3 – 4.11 – 6.00 – no Soundings along middle of Channel. Then 4.10 – 4.11 – 4.9 – 4.10 – 4.5 – 4.7 – 4.6 – at D no Soundings —

Fall 2 feet 5 inches 5/10 hs

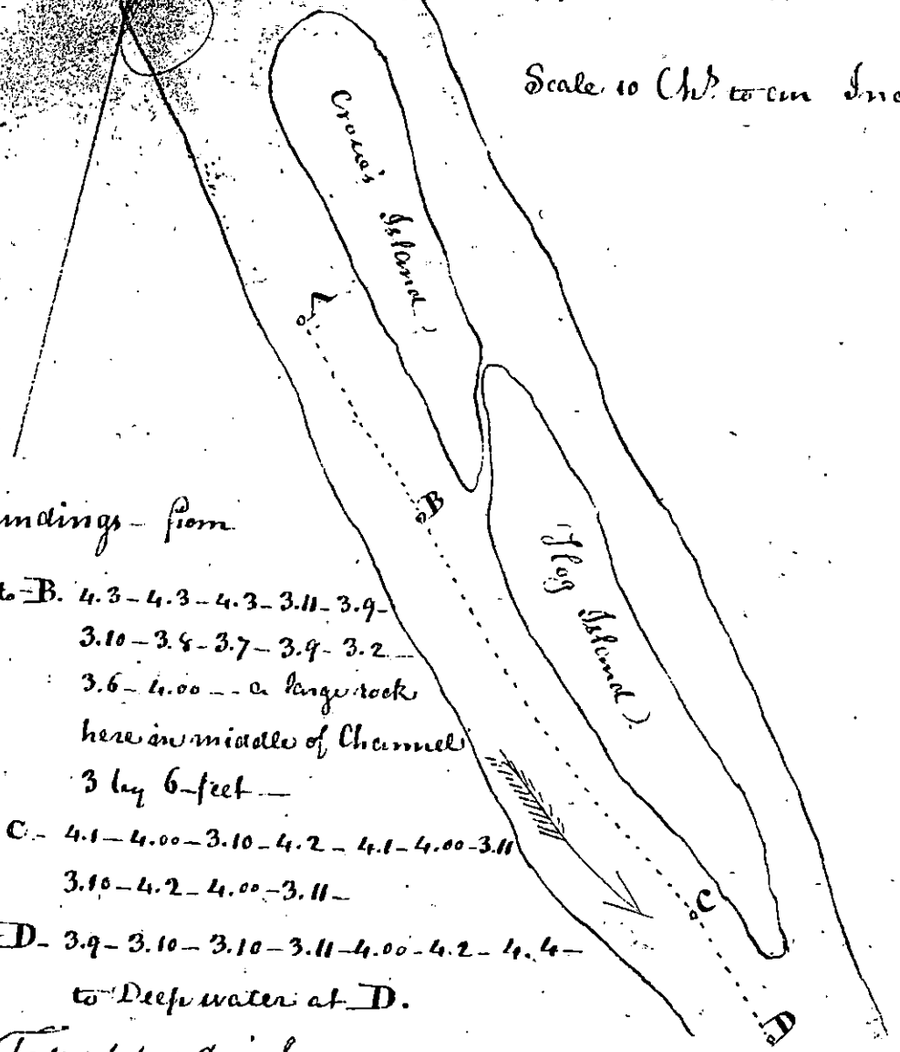
Remarks.

This Shoal is 18 miles below Pittsburgh — The bar is formed principally of Sand & Gravel. There are many logs on the bar, some of which are in or near the Channel.

Shoal No. 9

Crows Island & Hog Island

Scale 10 Chs to an Inch



Soundings from

A to B. 4.3 – 4.3 – 4.3 – 3.11 – 3.9 –
3.10 – 3.8 – 3.7 – 3.9 – 3.2 –
3.6 – 4.00 – a large rock
here in middle of Channel
3 by 6 feet –

B to C. 4.1 – 4.00 – 3.10 – 4.2 – 4.1 – 4.00 – 3.11
3.10 – 4.2 – 4.00 – 3.11 –

C to D. 3.9 – 3.10 – 3.10 – 3.11 – 4.00 – 4.2 – 4.4 –
to Deep water at D.

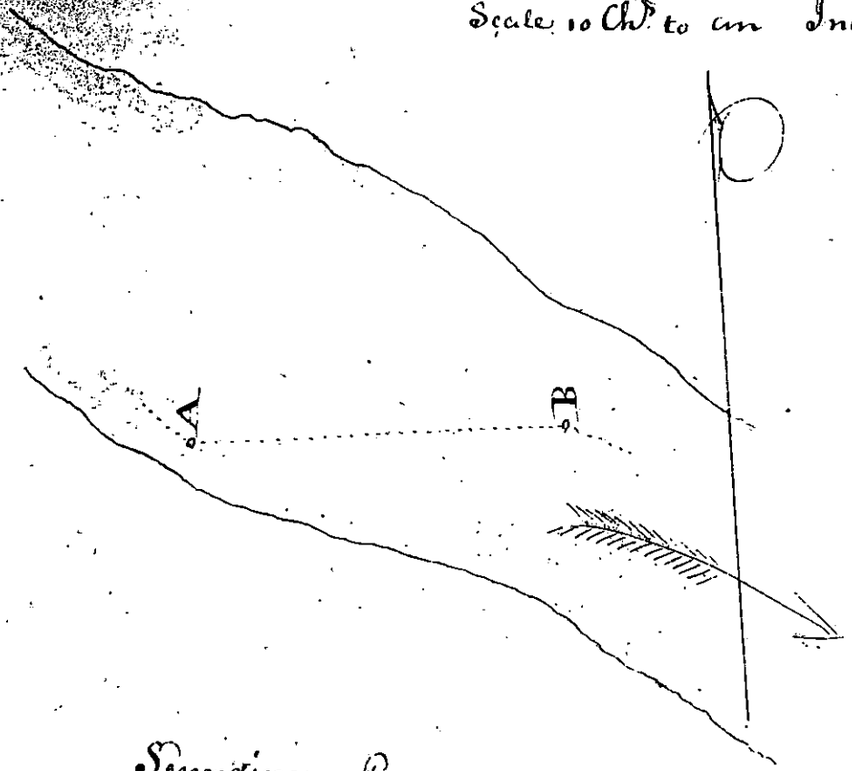
Falls 1 foot 8 inches

Remarks.

This Shoal is about 24 miles below Pittsburg
There are some dangerous rocks, in the
Channel, and the bed appears formed
of stone and gravel.

Shoal No. 10 Atkinson's Bar.

Scale 10 Chs to an Inch



Soundings from

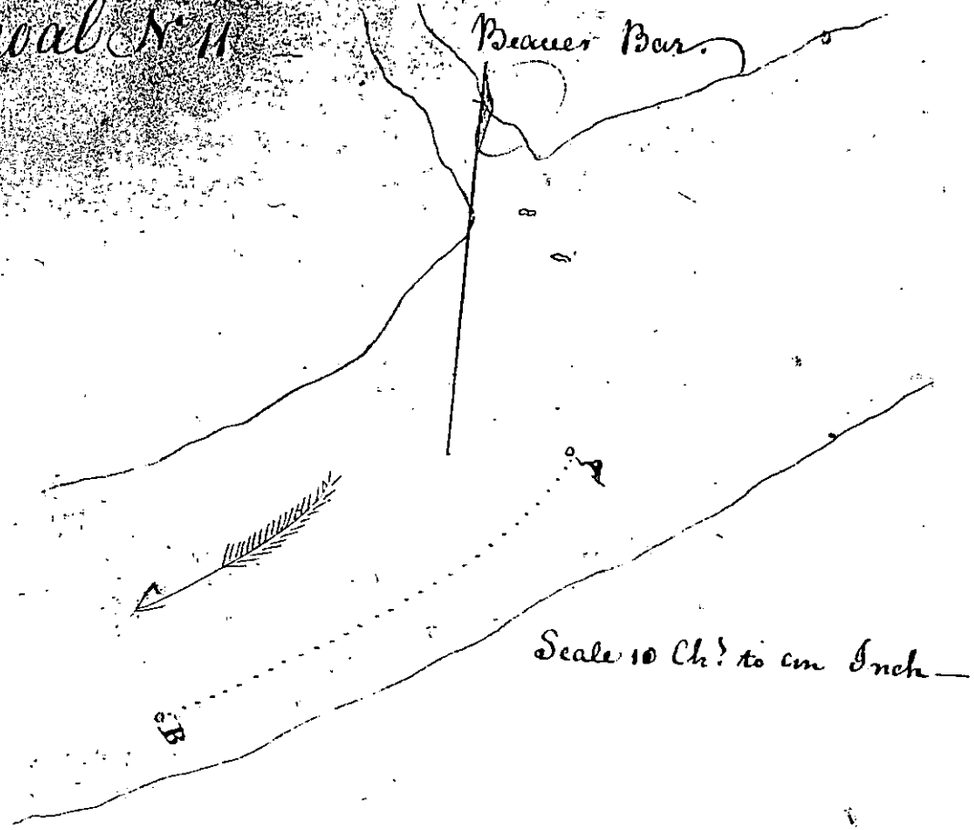
A to B 4.1 - 4.2 - 3.9 - 3.8 - 3.6 - 3.6 -
3.10 - 4.2 - 4.2 then deep water.

Tide 2 inches

Remarks.

This obstruction is about a mile and a half clear of Big Beaver — the shoal is not difficult or dangerous to pass — The bar is formed of gravel

Shoal N° 11



Scale 10 Ch.s to an Inch—

Soundings — from —

A to B. 4.4 – 4.7 – 3.11 – 4.7. —

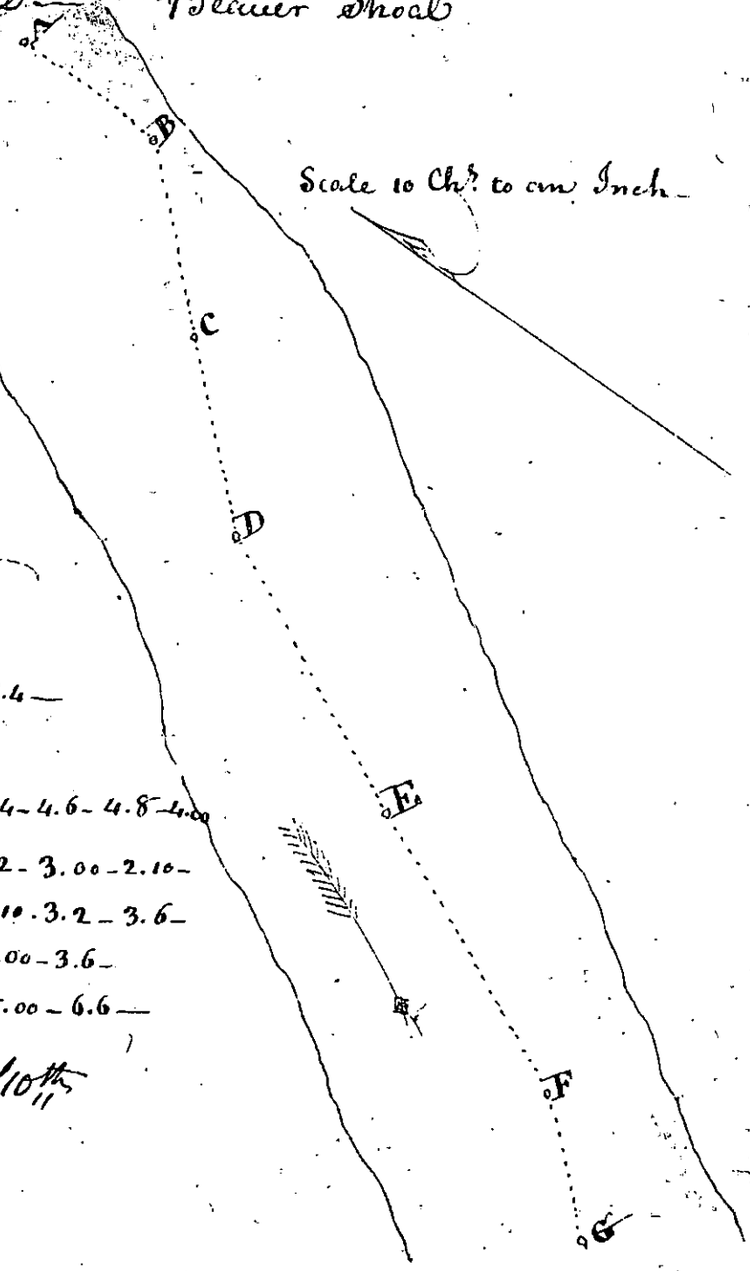
Fall 2 feet 9 inches 7/10ths

Remarks.

The Current is very rapid over this bar. There are some rocks and near the Channel. The bar otherwise appears to be formed of gravel.

Shoal No 12

Beaver Shoal



Scale 10 Chs to an Inch

Soundings from

A to B 4.6 – 3.11 – 3.6 –

B to C 6.3. 3.5 – 3.11 – 3.4 –

C to D Deep water

D to E 5.00 – 4.7 – 4.6 – 4.4 – 4.6 – 4.8 – 4.00

E to F 3.5 – 3.4 – 2.10 – 3.2 – 3.00 – 2.10 –
2.8 – 2.10 – 3.00 – 2.10 . 3.2 – 3.6 –
2.10 – 3.2 – 3.6 – 3.00 – 3.6 –

F to G 4.5 – 4.9 – 4.10 – 5.00 – 6.6 –

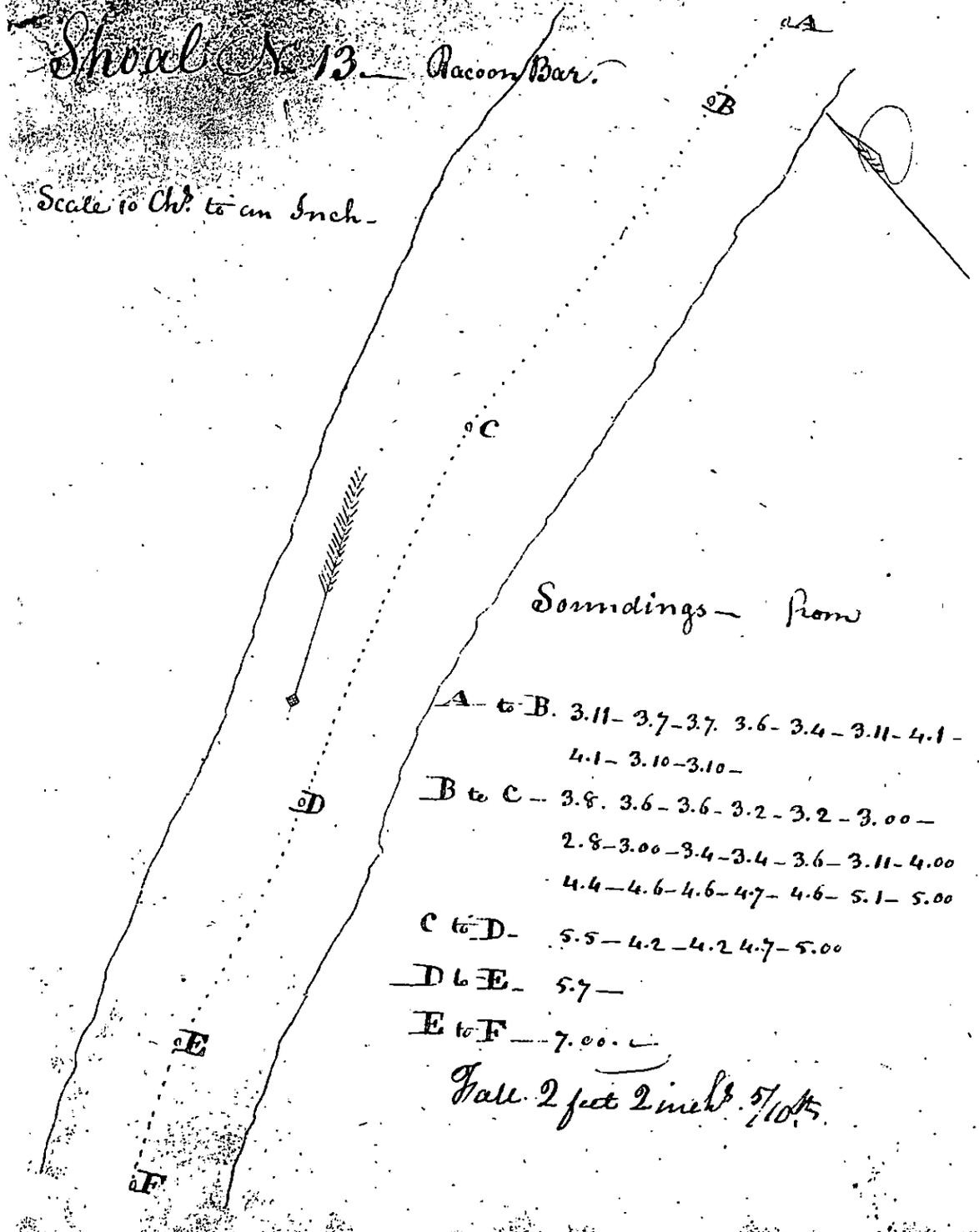
Fall 3 feet 00 in 2/10 ths

Remarks.

This Shoal forms a pretty seamous Obstruction. The space of water and distance over the Shoal is considerable, but the bar appears formed entirely of gravel.

Shoal No 13 — Racoon Bar.

Scale 10 Chs. to an Inch.



Soundings — From

A — to B. 3.11 — 3.7 — 3.7. 3.6 — 3.4 — 3.11 — 4.1 —
4.1 — 3.10 — 3.10 —

B to C — 3.8. 3.6 — 3.6 — 3.2 — 3.2 — 3.00 —
2.8 — 3.00 — 3.4 — 3.4 — 3.6 — 3.11 — 4.00
4.4 — 4.6 — 4.6 — 4.7 — 4.6 — 5.1 — 5.00

C to D — 5.5 — 4.2 — 4.2 4.7 — 5.00

D to E — 5.7 —

E to F — 7.00. —

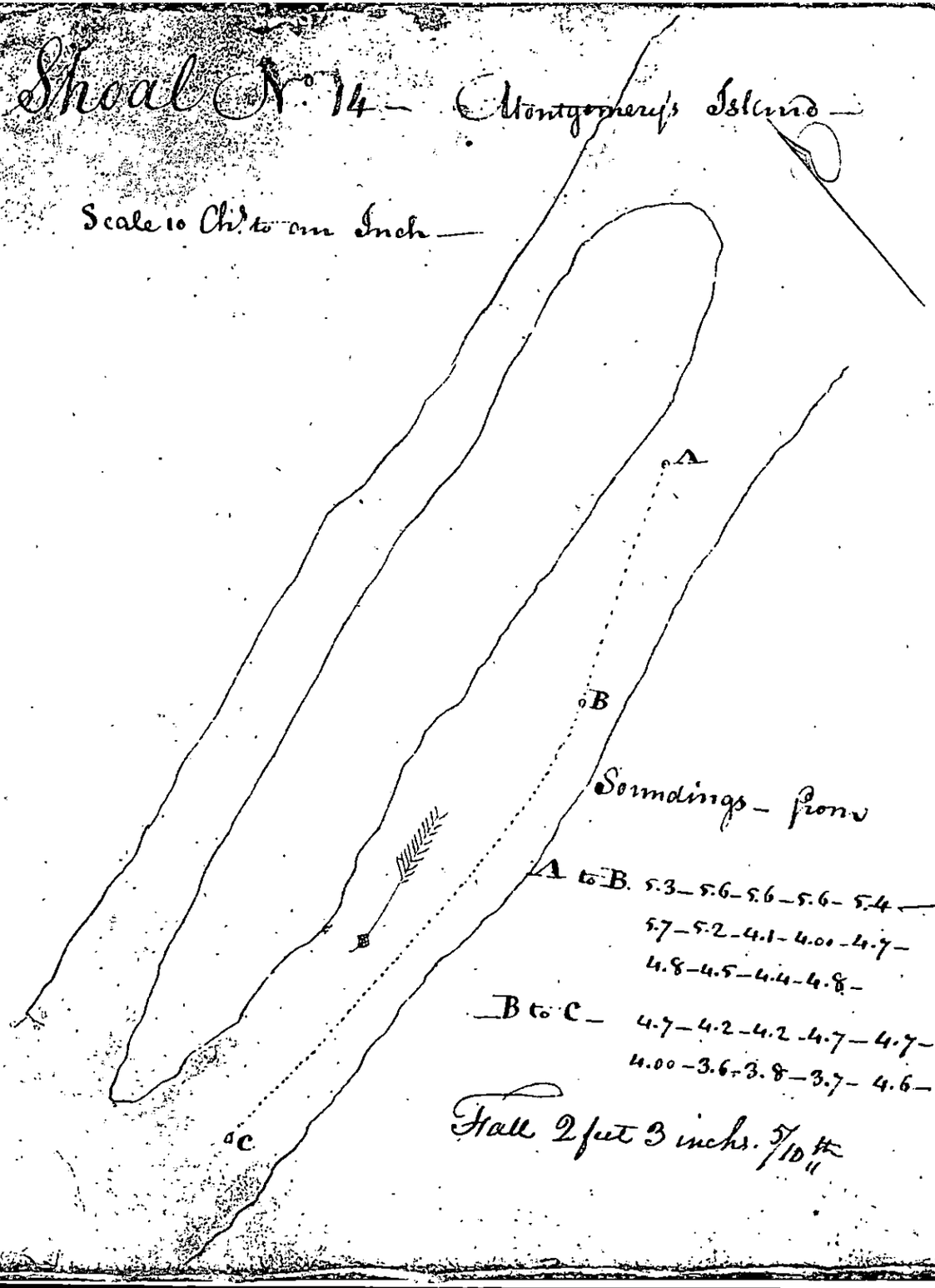
Fall 2 feet 2 inch. 5/10ths.

Remarks.

This Shoal is about 2 1/2 miles below Beaver
There are a number of rocks in and
near the Channel which occasion many
breakers — There is much drift depos=
ited on the bars above and below the
mouth of Racoon Creek —

Shoal N° 14 — Montgomery's Island —

Scale 10 Ch.s to an Inch —



Soundings — from

A to B. 5.3 — 5.6 — 5.6 — 5.6 — 5.4 —
5.7 — 5.2 — 4.1 — 4.00 — 4.7 —
4.8 — 4.5 — 4.4 — 4.8 —

B to C — 4.7 — 4.2 — 4.2 — 4.7 — 4.7 —
4.00 — 3.6 — 3.8 — 3.7 — 4.6 — 5.9

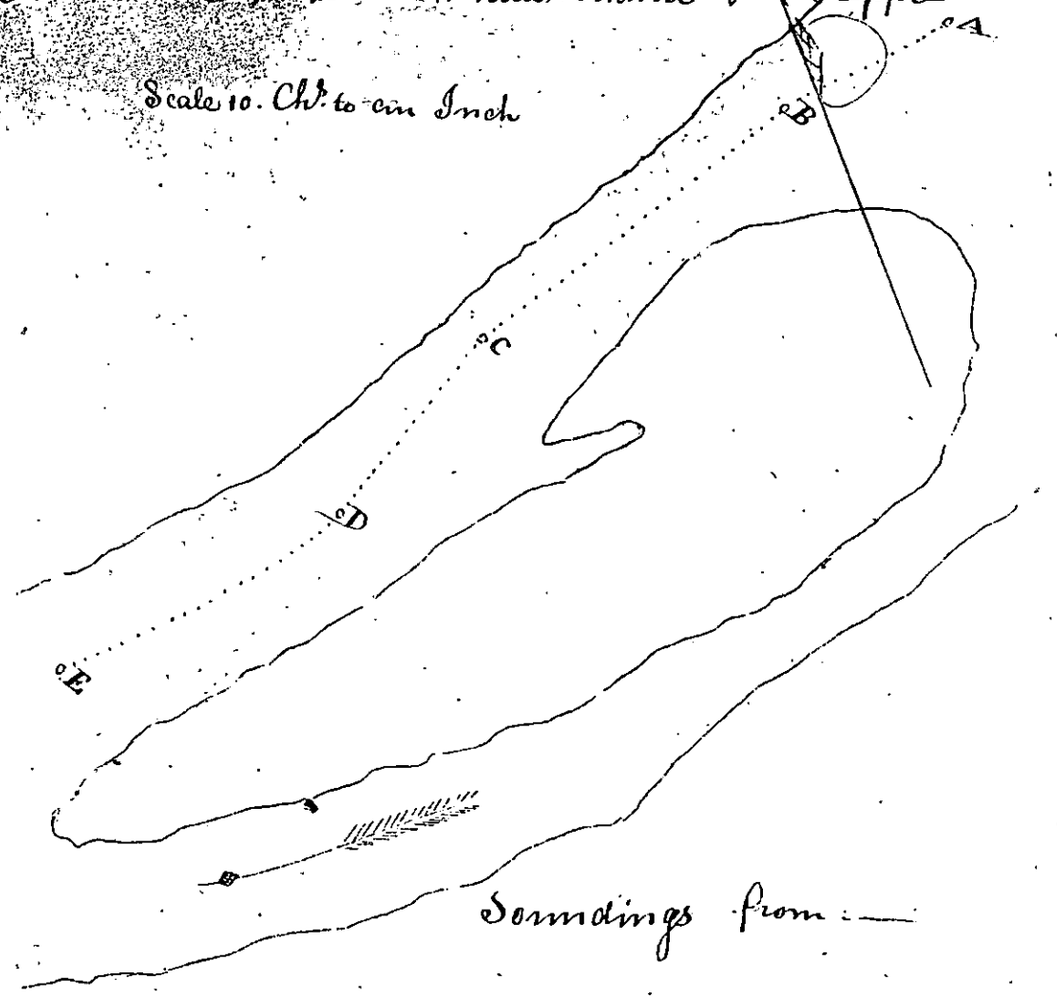
Hall 2 feet 3 inches. 5/10 ths

Remarks.

In this shoal which is five miles below Beaucer. There are a number of rocks along and near the Pennsylvania Shore, and several logs in and near the Channel — The bar attending exhibits to be formed of gravel.

Shoal No 15 — Phillis Island & Ripple

Scale 10 Ch.s to an Inch



Soundings from :—

A to B. 4.7 - 5.4 - 5.3 - 4.11 - 3.7 - 4.00 - 4.2 - 4.3 - 4.6 - 4.9 - 5.4

B to C. 7.00 — & Deep Water to C —

C to D. 7.9 — 4.7 - 4.4 — 4.00 — 4.5 - 5.2 — 5.4 —

D to E. 5.2 - no other soundings till at E 5.9 —

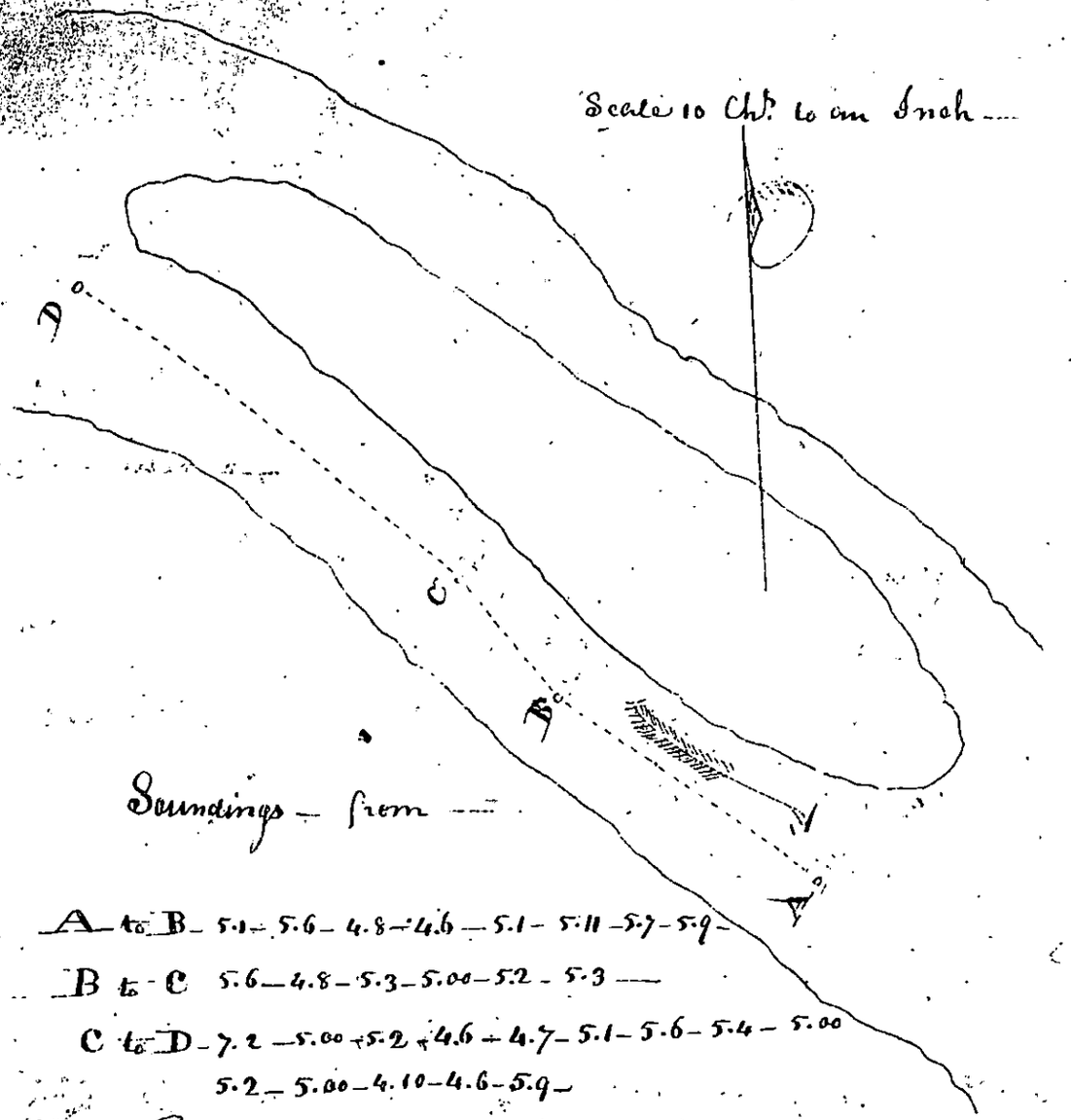
Tide 1 foot 5 inches

Remarks.

There are some dangerous logs ~~and others~~ in and others near the Channel on this bear and some rocks to the right of the Channe at B. The bar ~~of~~ otherwise is formed of gravel.

Shoal N° 16 — Cape or Georgetown Island —

Scale 10 Ch.s to an Inch —



Soundings — from —

A to B — 5.1 — 5.6 — 4.8 — 4.6 — 5.1 — 5.11 — 5.7 — 5.9 —

B to C 5.6 — 4.8 — 5.3 — 5.00 — 5.2 — 5.3 —

C to D — 7.2 — 5.00 — 5.2 — 4.6 — 4.7 — 5.1 — 5.6 — 5.4 — 5.00
5.2 — 5.00 — 4.10 — 4.6 — 5.9 —

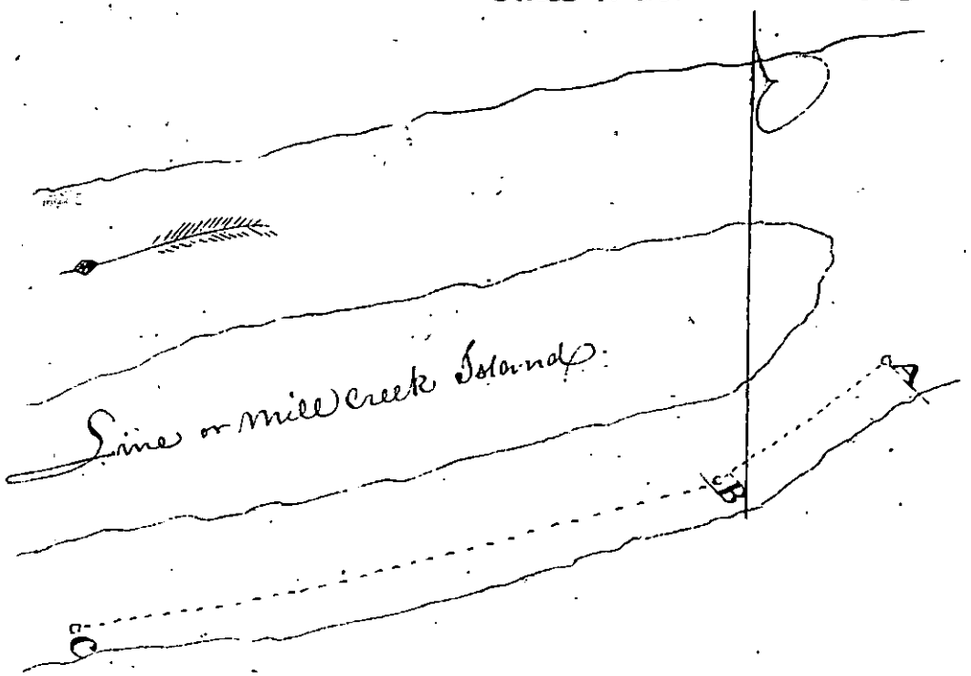
Tall 2 feet

Remarks.

There are a number of rocks in and near the Channel near this bar, that should be removed, except these rocks, the bar is formed of Gravel.

Shoal N° 17 — Line or Mill Creek Islands —

Scale 10 Ch.s to an Inch —



Soundings from

A to B — 4.7 — 2.10 — 2.9 — 4.00 —

B to C — 4.11 — 4.09 — 4.10 — 4.4 —
5.6 — 5.00 — 4.3 — 5.6 — 5.8 — 6.6 —

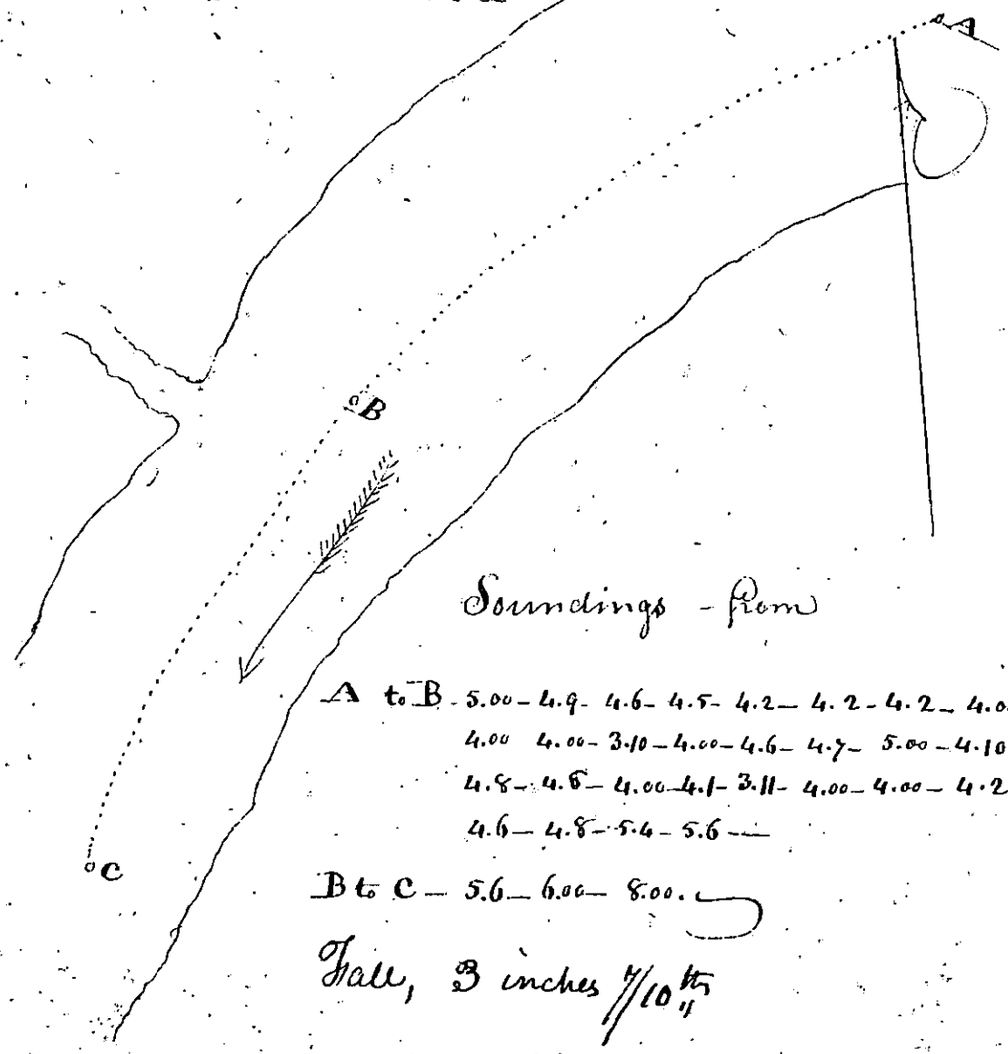
Fall 1 foot 11 inches

Remarks.

The line separating Virginia and Pennsylvania passes over this Shoal. — The bar is principally formed of gravel. But there are a number of rocks in and near the Channel; and on the Virginia Shore: There are about 50 large rocks, which are very dangerous & difficult to boats ascending the river when the Ohio is half Banks.

Shoal N. 18 Little Yellow Creek.

Scale 10 Chs to an Inch.



Soundings - from

A to B - 5.00 - 4.9 - 4.6 - 4.5 - 4.2 - 4.2 - 4.2 - 4.00 -
4.00 4.00 - 3.10 - 4.00 - 4.6 - 4.7 - 5.00 - 4.10 -
4.8 - 4.6 - 4.00 - 4.1 - 3.11 - 4.00 - 4.00 - 4.2 -
4.6 - 4.8 - 5.4 - 5.6 -

B to C - 5.6 - 6.00 - 8.00.

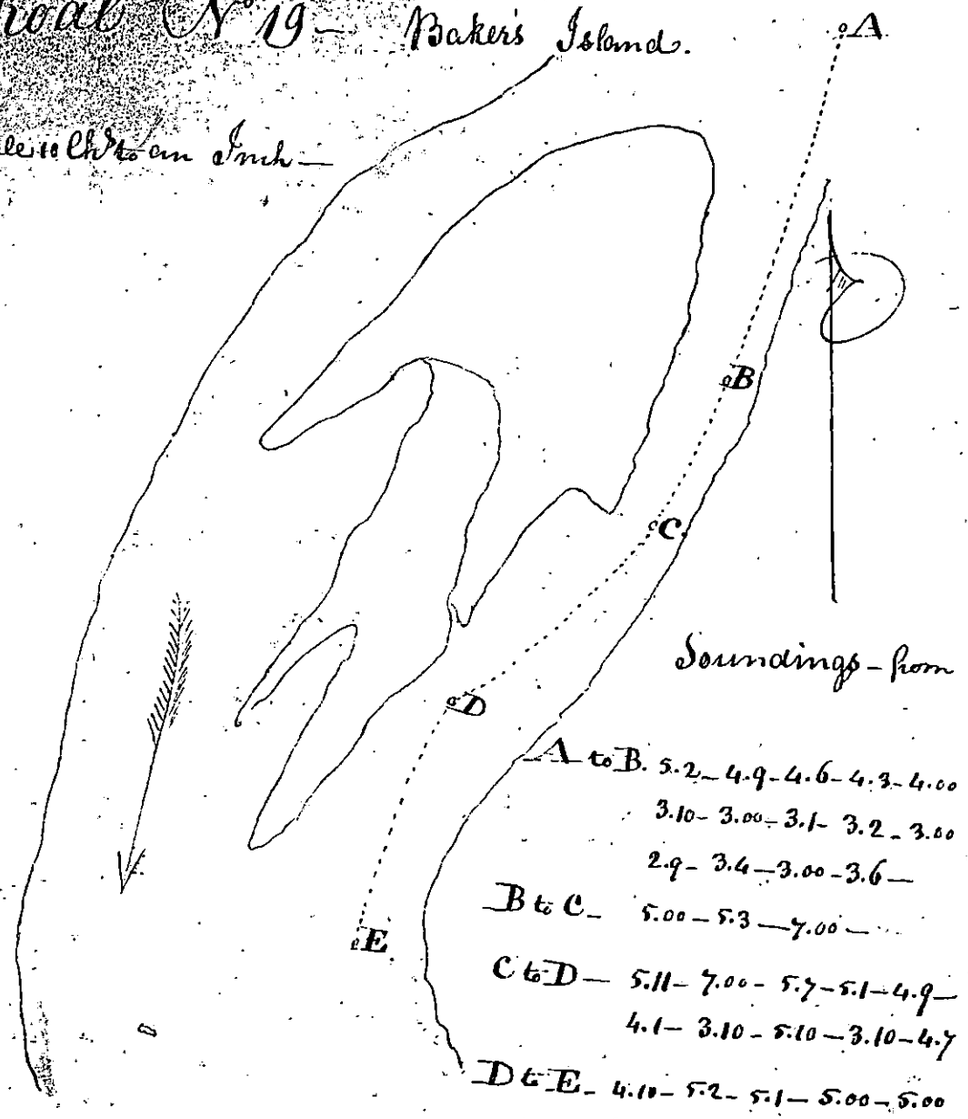
Fall, 3 inches 7/10 ths

Remarks.

On this bar there many round stone & some logs near the channel but the bar generally appears to be formed of Gravel

Shoal No 19 — Bakers Island.

Scale 11 Chs to an Inch —



Soundings — from

A to B. 5.2 — 4.9 — 4.6 — 4.3 — 4.00
3.10 — 3.00 — 3.1 — 3.2 — 3.00
2.9 — 3.4 — 3.00 — 3.6 —

B to C — 5.00 — 5.3 — 7.00 —

C to D — 5.11 — 7.00 — 5.7 — 5.1 — 4.9 —
4.1 — 3.10 — 5.10 — 3.10 — 4.7

D to E — 4.10 — 5.2 — 5.1 — 5.00 — 5.00
4.11 — 5.2 5.4 — 5.2 — 4.11 —
4.10 — 4.5 — 3.10 — 5.5 — 5.6 —

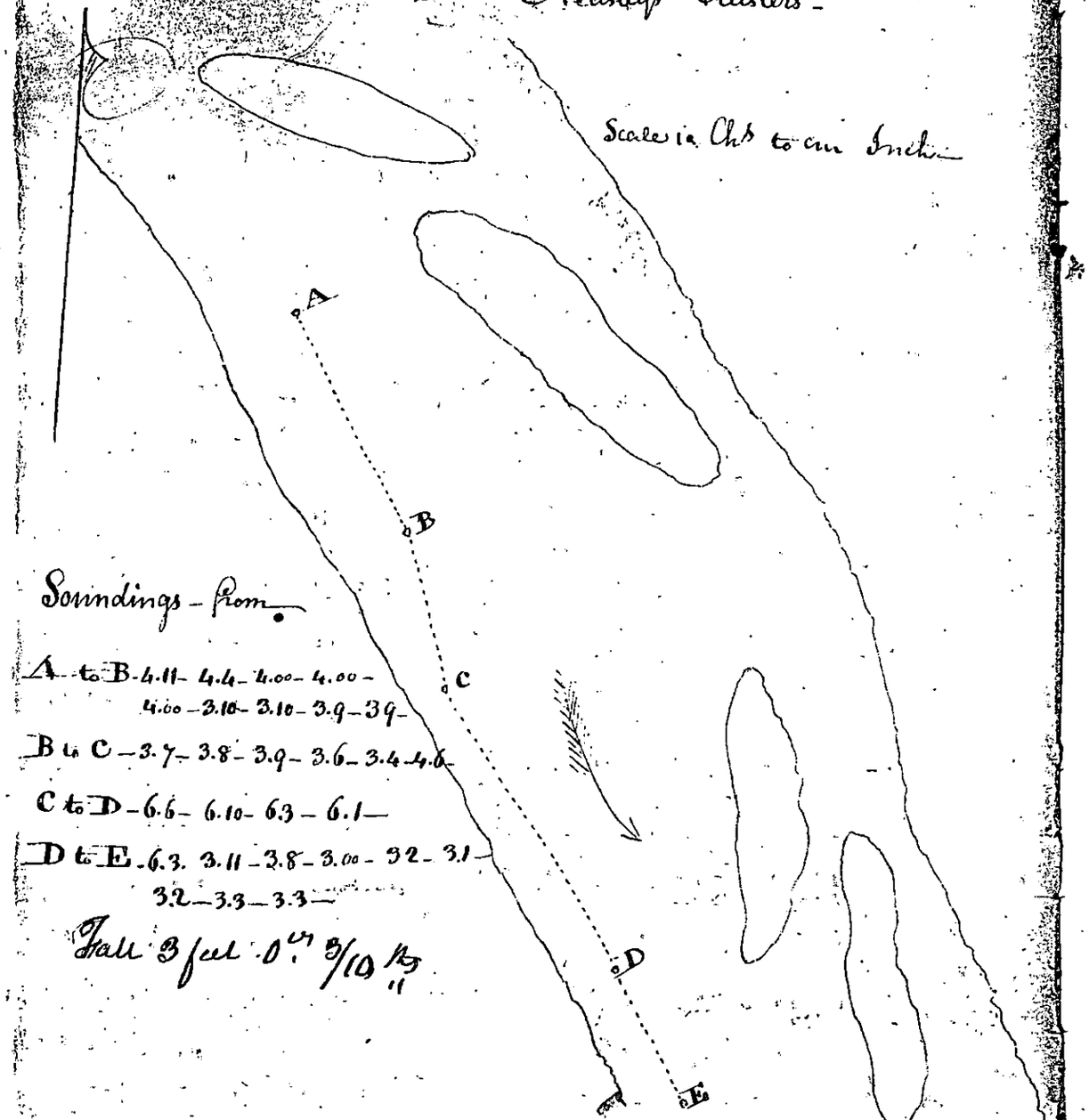
Tide 7. inches

Remarks.

This Island is a ~~bars~~ above the mouth of big Yellow Creek. There are some ~~stones~~ doubt which side of the bar ought to be imposed, The greatest proportion of water appears to flow on the right hand side, where the bar is principally of rock. The left hand side of the channel was surveyed; which has seemed bar leaving from the Island to the Virginia Shore. There are some ~~snags~~ logs on these bars; but otherwise they appear to be formed of granite.

Shoal No. 20 — Newleys Clusters —

Scale is Chs to an Inch —



Soundings — from —

A to B — 4.11 — 4.4 — 4.00 — 4.00 — 4.00 — 3.10 — 3.10 — 3.9 — 3.9 —

B to C — 3.7 — 3.8 — 3.9 — 3.6 — 3.4 — 4.6 —

C to D — 6.6 — 6.10 — 6.3 — 6.1 —

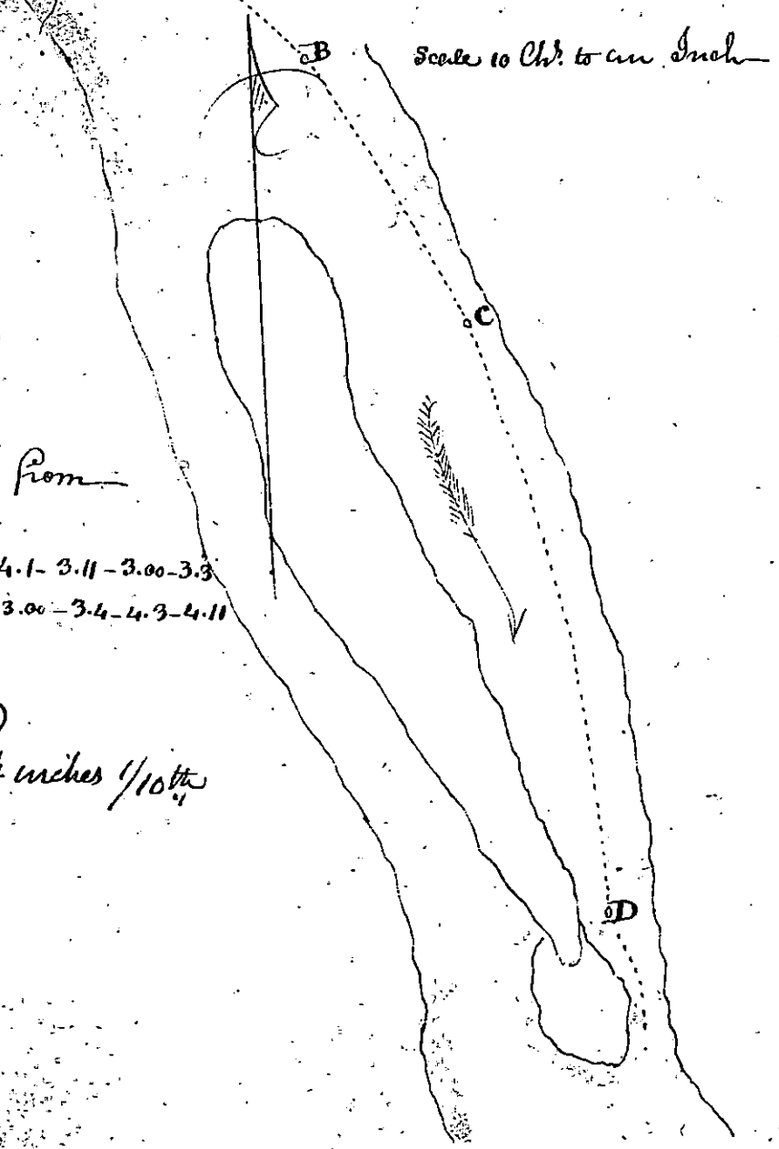
D to E — 6.3 — 3.11 — 3.8 — 3.00 — 3.2 — 3.1 — 3.2 — 3.3 — 3.3 —

Tall Buoy 3 feet 0 in. B/10 Ks

Remarks.

These Islands form several bars in the Course of the Survey, between which there is a sufficiency of water — There are some logs and some rocks, that obstruct the Channel; Otherwise the bars appear to be formed of that kind of gravel most easily removed.

Shoal No. 21 — Tomelsons Island —



Scale 10 Chs. to an Inch —

Soundings — from —

A to B - 4.11 - 4.9 - 4.1 - 3.11 - 3.00 - 3.3
2.11 - 3.1 - 3.00 - 3.4 - 4.3 - 4.11

B to C - 5.3 —

C to D - 6.00

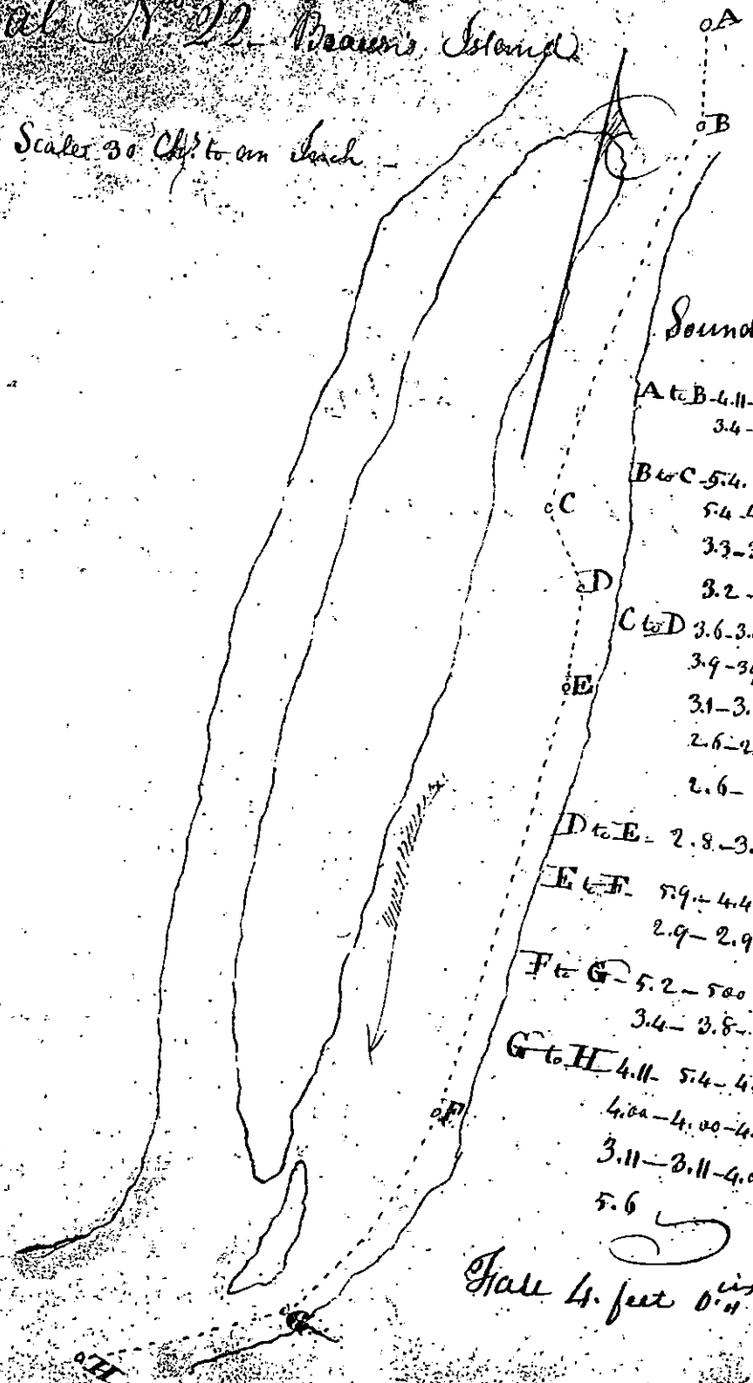
Fall 1 foot 4 inches 1/10ths

Remarks. —

There are a number of log & rocks in and near the Channel. Some of the rocks are of considerable size — The bar seperated from these is formed of gravel — This Island is 4 miles below Yellow Calck. —

7 Shoal No 22 Beaver Island

Scale 30 Chs to an Inch



Soundings from

A to B 4.11 4.7 4.5 4.1 3.11 3.00
3.4 3.1 2.11 2.11 3.7 4.6

B to C 5.4 5.4 5.6 5.00 4.4
5.4 4.3 4.00 3.11 3.6
3.3 3.2 3.00 3.00 3.00
3.2

C to D 3.6 3.9 3.8 3.8 3.6
3.9 3.9 3.6 3.3 3.2
3.1 3.1 3.00 2.8 2.6
2.6 2.6 2.6 2.4 2.4
2.6

D to E 2.8 3.00 3.6 4.00 4.4

E to F 5.9 4.4 3.6 3.5 3.00
2.9 2.9 2.11 3.00 4.2

F to G 5.2 5.00 4.00 3.00 3.2
3.4 3.8 4.5

G to H 4.11 5.4 4.5 4.7 4.4 4.4
4.00 4.00 4.00 4.00 4.00 3.10
3.11 3.11 4.00 4.7 4.9 5.3
5.6

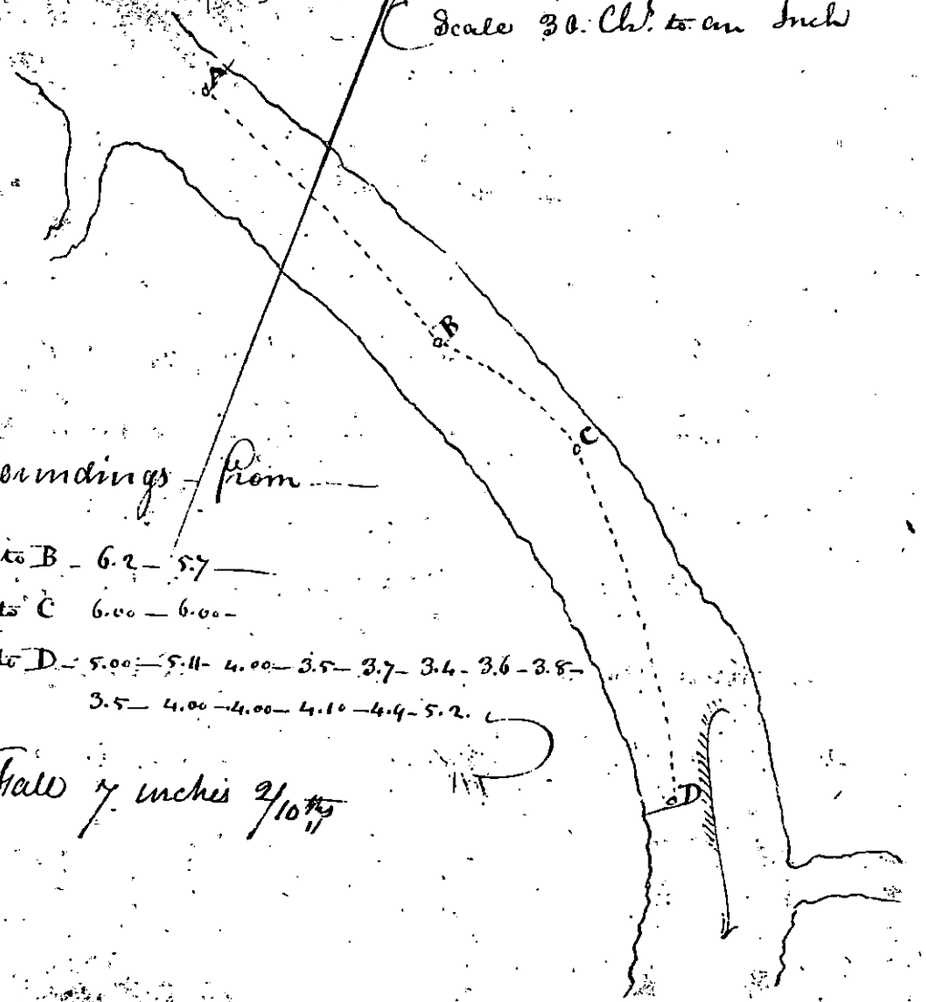
Hall 4. feet 0 ins 11 7/10ths

Remarks.

This may be considered among the most formidable obstructions in this part of the river. There appear to be about 20 perches of rock bottom near the middle of the Stream. The obstructions otherwise are principally gravelled bars, on which a few detached rocks and logs are to be found.

Shoal N° 23 Wills Creek

Scale 30 Ch.s to an Inch



Soundings from —

A to B 6.2 — 5.7 —

B to C 6.00 — 6.00 —

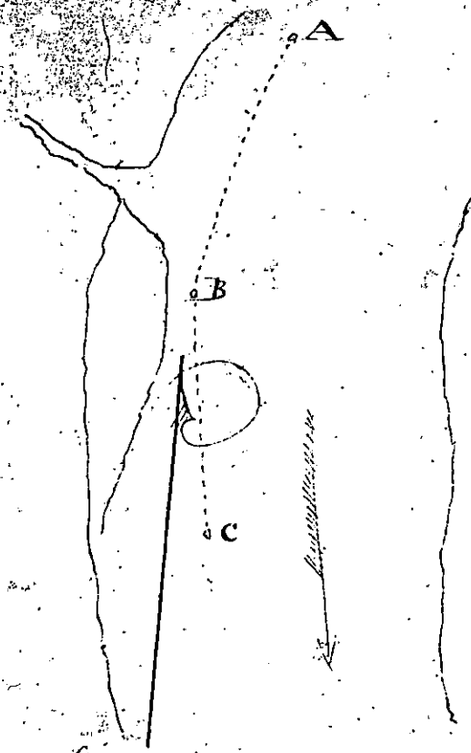
C to D — 5.00 — 5.11 — 4.00 — 3.5 — 3.7 — 3.4 — 3.6 — 3.8 —
3.5 — 4.00 — 4.00 — 4.10 — 4.4 — 5.2.

Fall 7 inches 2/10ths

Remarks.

This shoal which is about two miles above ~~Steubenville~~ is neither dangerous or difficult to pass. There are some logs and rocks, that should be removed — There is lest on shoal distance on the bar where the Channel regaines deepening — Seperate from these rocks — the shoal is of Gravel. —

Shoal N° 24 Lauterville Bar.



Scale 10 Chs to one Inch

Soundings from

A to B. 5.1 – 4.8 – 4.4 – 4.0 – 3.7 – 3.7 – 3.5 – 3.2 – 3.00 – 3.11 – 3.9 – 3.3

B to C – 3.8 – 3.10 – 4.6 – 4.7 – 4.6 – 5.7.

Fall 1 foot 1 inch.

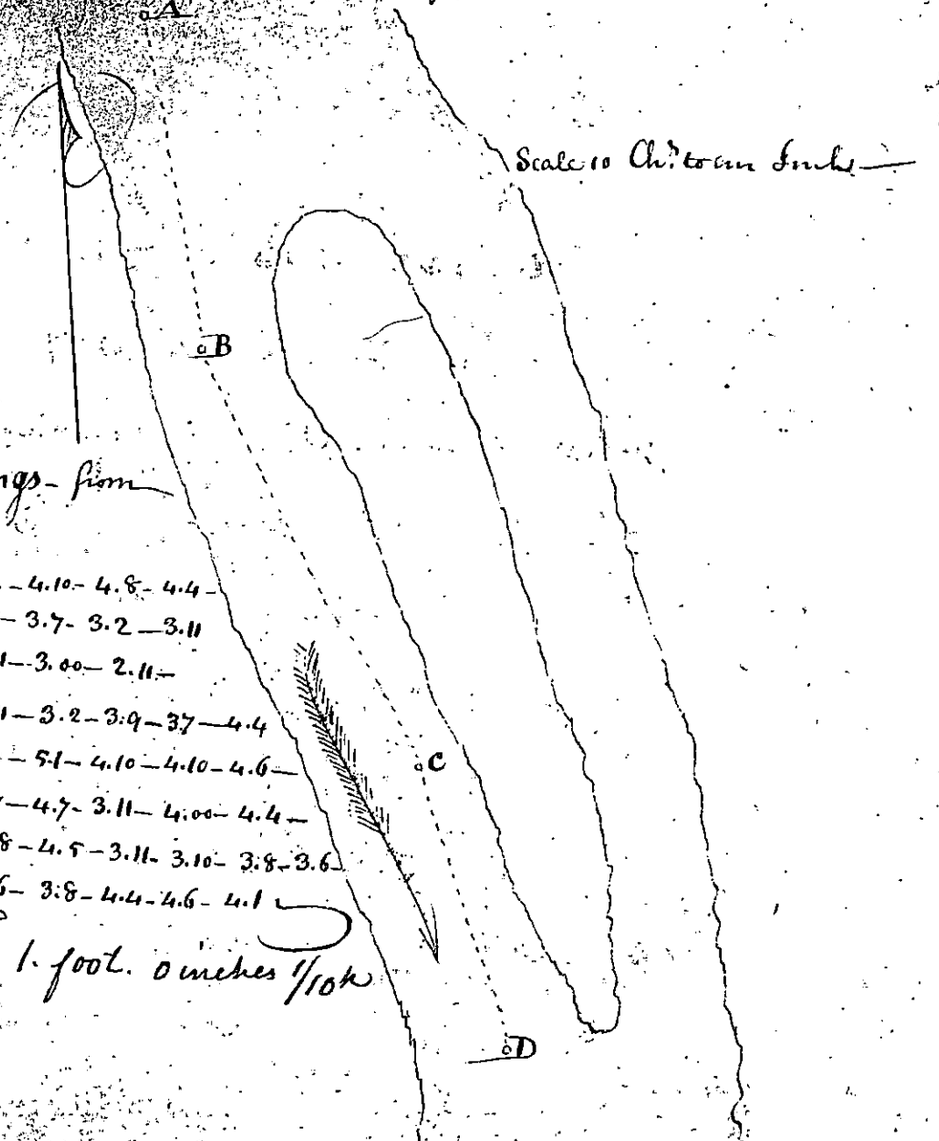
Remarks.

This bar is about half a mile below Hardwood

The distance over the bar is short. There is a rock near B. and some logs near the foot of the Shoal, which should be removed.

The Bar is formed of gravel.

Shoal N° 25 — Mingo Island Bar —



Scale 10 Ch.s to an Inch —

Soundings from

A to B — 5.2 — 4.10 — 4.8 — 4.4 —
3.8 — 3.7 — 3.2 — 3.11
2.11 — 3.00 — 2.11 —

B to C — 2.11 — 3.2 — 3.9 — 3.7 — 4.4
4.4 — 5.1 — 4.10 — 4.10 — 4.6 —

C to D — 4.7 — 4.7 — 3.11 — 4.00 — 4.4 —
4.8 — 4.5 — 3.11 — 3.10 — 3.8 — 3.6
3.6 — 3.8 — 4.4 — 4.6 — 4.1

Fall 1 foot 0 inches 1/10th

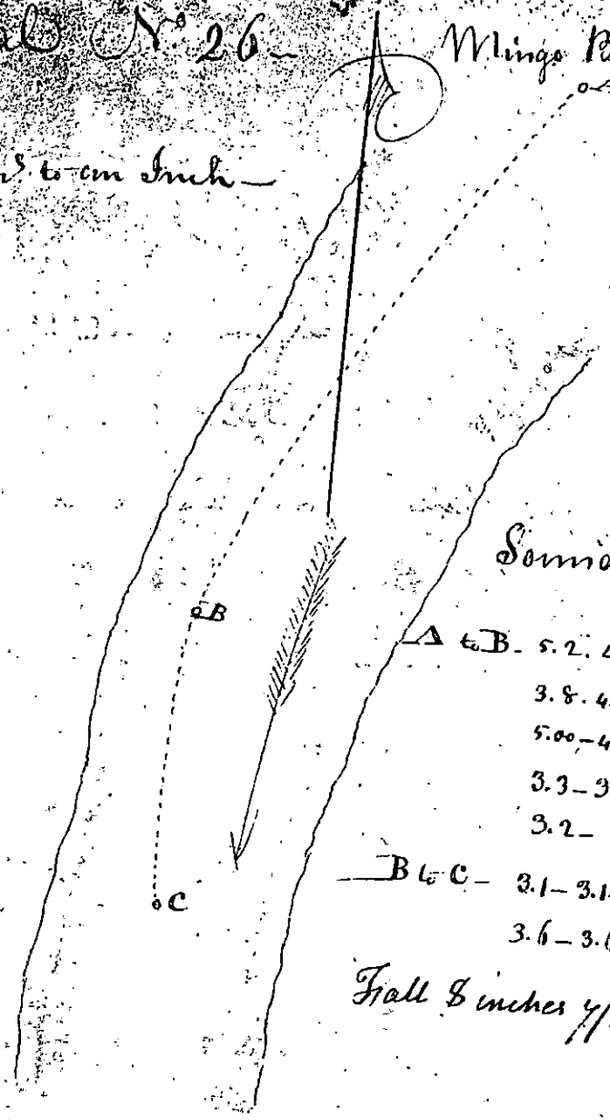
Remarks

These are gravel bars, on which there are some logs deposited, which injure & endanger the navigation, about half a mile below the Mouth of the Crop Creeks. There is also a bar which was not sounded, where for about 100 feet — there was but 4 feet 11 inches water. This Shoal is two miles below Steubenville.

Shoal № 26

Scale 10 Chs to an Inch

Mlings Bottom



Soundings - from

A & B - 5.2. 4.4 - 4.2 - 3.8 - 3.3 -
3.8. 4.00 - 4.4 - 5.00 - 5.00
5.00 - 4.10 - 4.6 - 4.2 - 3.6 -
3.3 - 3.2 - 3.00 - 3.00 - 3.2 -
3.2 -

B & C - 3.1 - 3.1 - 3.1 - 3.3 - 3.2 - 3.6 -
3.6 - 3.6 - 4.3 - 5.1

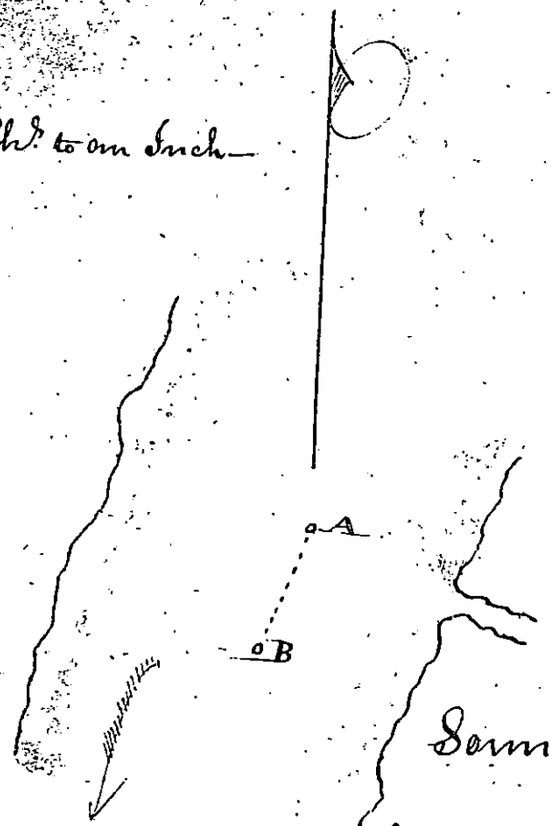
Fall 8 inches 7/10 Hrs

Remarks.

There are a number of logs deposited on this bar, in and near the Channel, otherwise the bar appears to be formed of Gravel.

Shoal No. 27 — Buffalo Shoal

Scale 10 Chs to an Inch



Soundings — from

A to B. 5.00 — 5.00 — 5.3 — 4.11
4.4 — 4.11 — 4.2 — 4.2
4.7 — 4.6 — 5.3 — 5.3

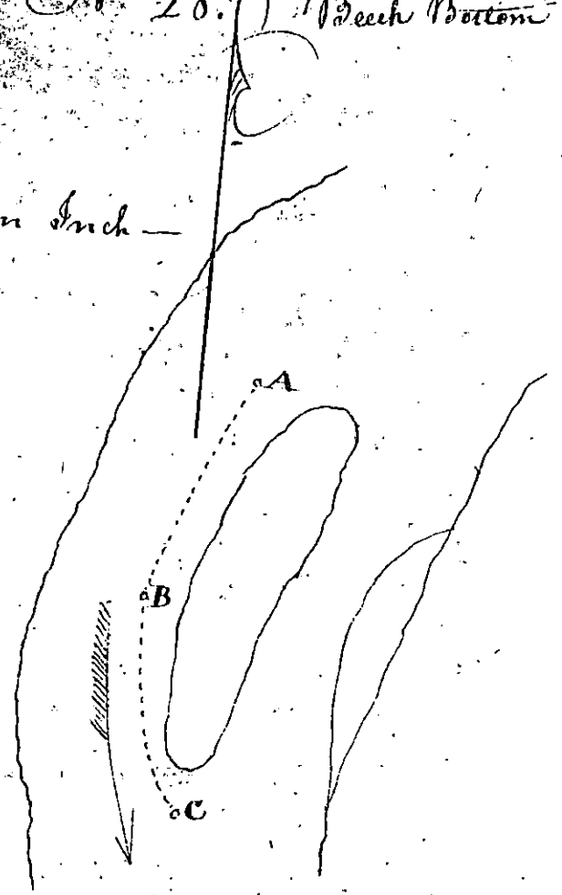
Fall 3 inches

Remarks.

This is an obstruction which extends only about 30 poles — There is about four feet water over the bar. The bottom of the Channel is gravel and the fall about three inches

Shoal N° 28. Beech Bottom Bar.

Scale 10 Ch.s to an Inch —



Soundings — from

A to B — 4.7 — 4.5 — 3.11 — 3.9 — 3.7 — 3.6 — 3.6 — 3.2 — 3.00 — 2.11 —

B to C — 2.11 — 3.00 — 3.2 — 3.6 — 4.00 — 4.7 — 5.00 — 5.1 — 5.3 —

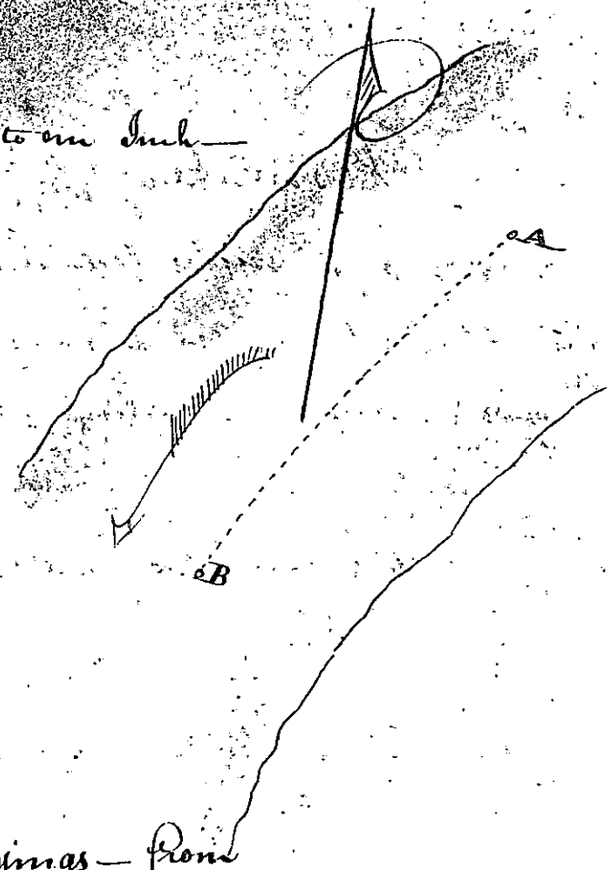
Fall 4 inches, 9/10ths

Remarks.

This Shoal is 3 miles below Charlestown of Wellsburgh. the water is not rapid over the bar and no other obstructions there, what-ever arises from a deficiency of water in the Channel; the bar is formed of Gravel

Shoal N° 29 — Short Creek Bar.

Scale 10 Ch. to an Inch —



Soundings — from

A to B — 5.3. 4.7 — 4.5 — 3.11 — 3.2 — 3.2 — 2.11 — 2.11 — 3.4 — 4.1 — 4.7 — 4.9 — 4.10 —

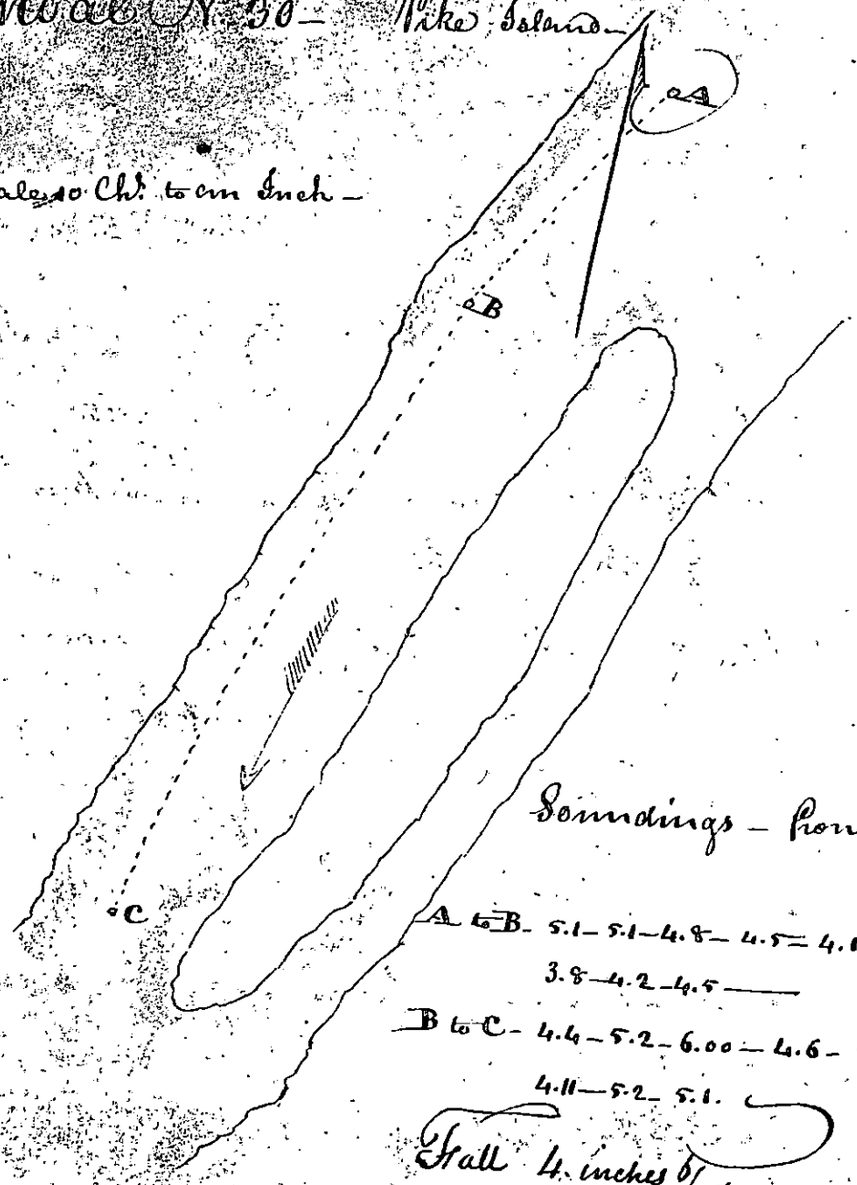
Fall 6 inches 5/10ths

Remarks.

This Shoal is about 9 miles above Wheeling, where there are many logs on a dry bar on the Ohio Shore. There however is no injury in low water. This bar is formed of gravel, on which there is but little water fall.

Sheet No. 30 — Pike Island —

Scale 10 Ch. to an Inch —



Soundings — from —

A to B — 5.1 — 5.1 — 4.8 — 4.5 = 4.1 — 3.1 — 3.8 — 4.2 — 4.5 —

B to C — 4.4 — 5.2 — 6.00 — 4.6 — 5.00 — 5.00 — 4.11 — 5.2 — 5.1.

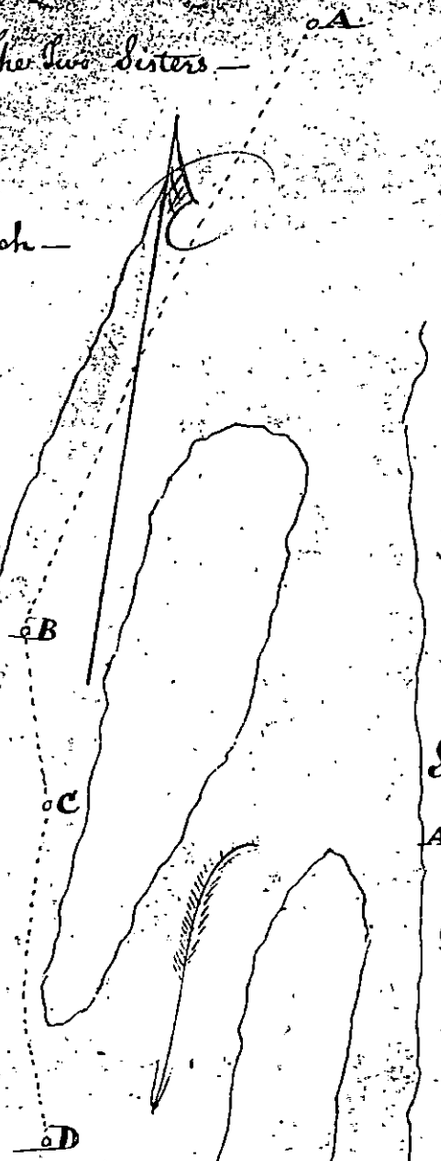
Fall 4. inches

Remarks. —

This Island and bars are about 4 miles above Wheeling. There are some logs near the Channel. The bar is formed of gravel; There is very little fall of water on the bar, and the soundings generally above four feet —

Shoal No 31 — The Two Sisters —

Scale 10 Ch. to an Inch —



Soundings — from

A to B. 9.00 — 4.4 — 3.6 — 2.8 —
3.2 — 3.8 — 4.4 —

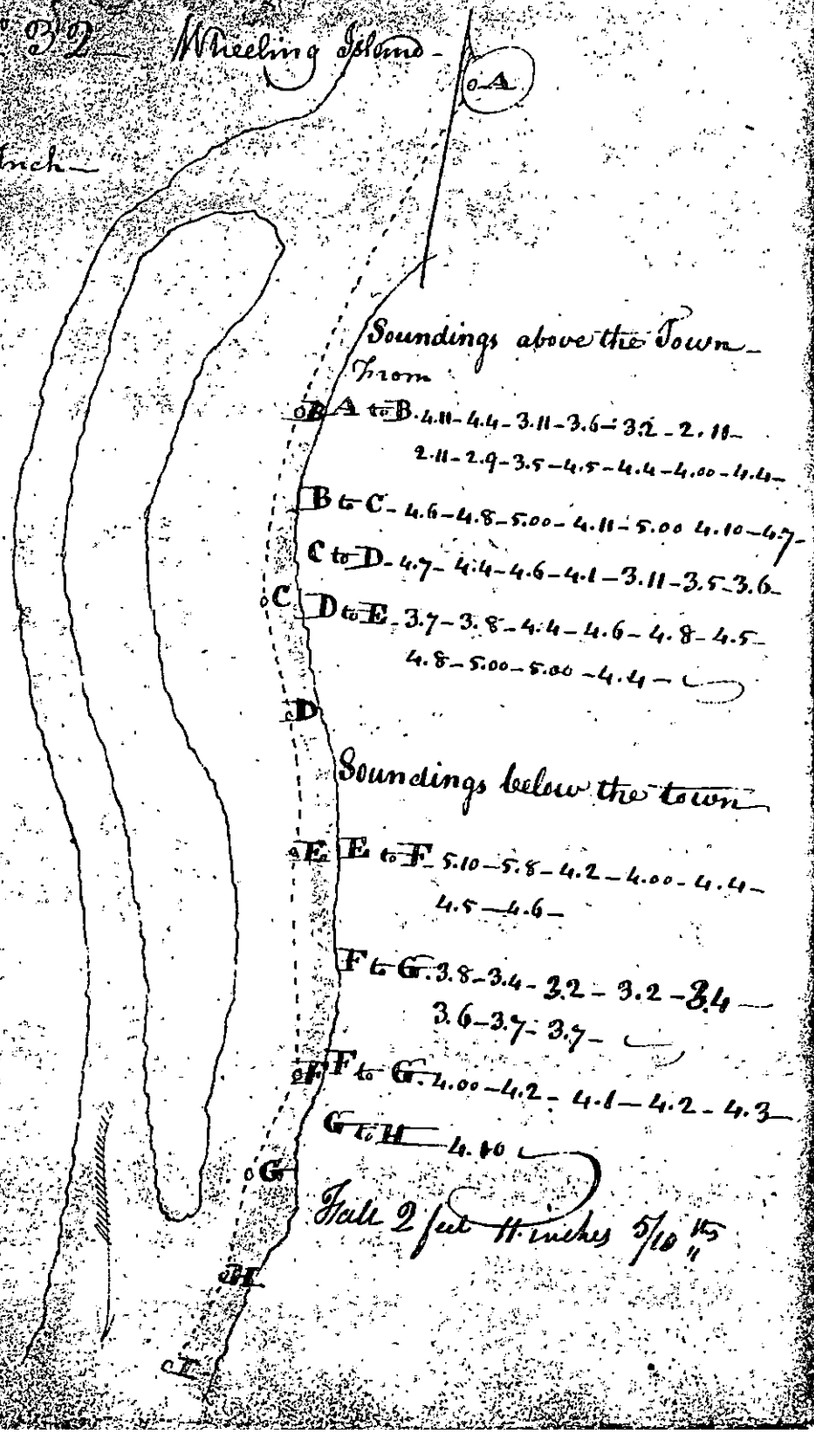
Fall 2 feet 1. inch 9/10

Remarks.

This Shoal is about three miles above Wheeling. There are some large logs and snags in and near the Channel. The bar is formed of gravel. About half a mile below this Shoal, is Glenn's ~~Run~~ Bar — on which there are a number of logs & but 2 feet 8 inches water. This bar however is very short.

Shoal No 32 Wheeling Island

Scale 1320 Ft. to an Inch



Soundings above the Town

From

A to B 4.11 - 4.4 - 3.11 - 3.6 - 3.2 - 2.11 - 2.11 - 2.9 - 3.5 - 4.5 - 4.4 - 4.00 - 4.4 -

B to C - 4.6 - 4.8 - 5.00 - 4.11 - 5.00 4.10 - 4.7 -

C to D - 4.7 - 4.4 - 4.6 - 4.1 - 3.11 - 3.5 - 3.6 -

D to E 3.7 - 3.8 - 4.4 - 4.6 - 4.8 - 4.5 - 4.8 - 5.00 - 5.00 - 4.4 -

Soundings below the town

E to F 5.10 - 5.8 - 4.2 - 4.00 - 4.4 - 4.5 - 4.6 -

F to G 3.8 - 3.4 - 3.2 - 3.2 - 3.4 - 3.6 - 3.7 - 3.7 -

F to G 4.00 - 4.2 - 4.1 - 4.2 - 4.3 -

G to H 4.10

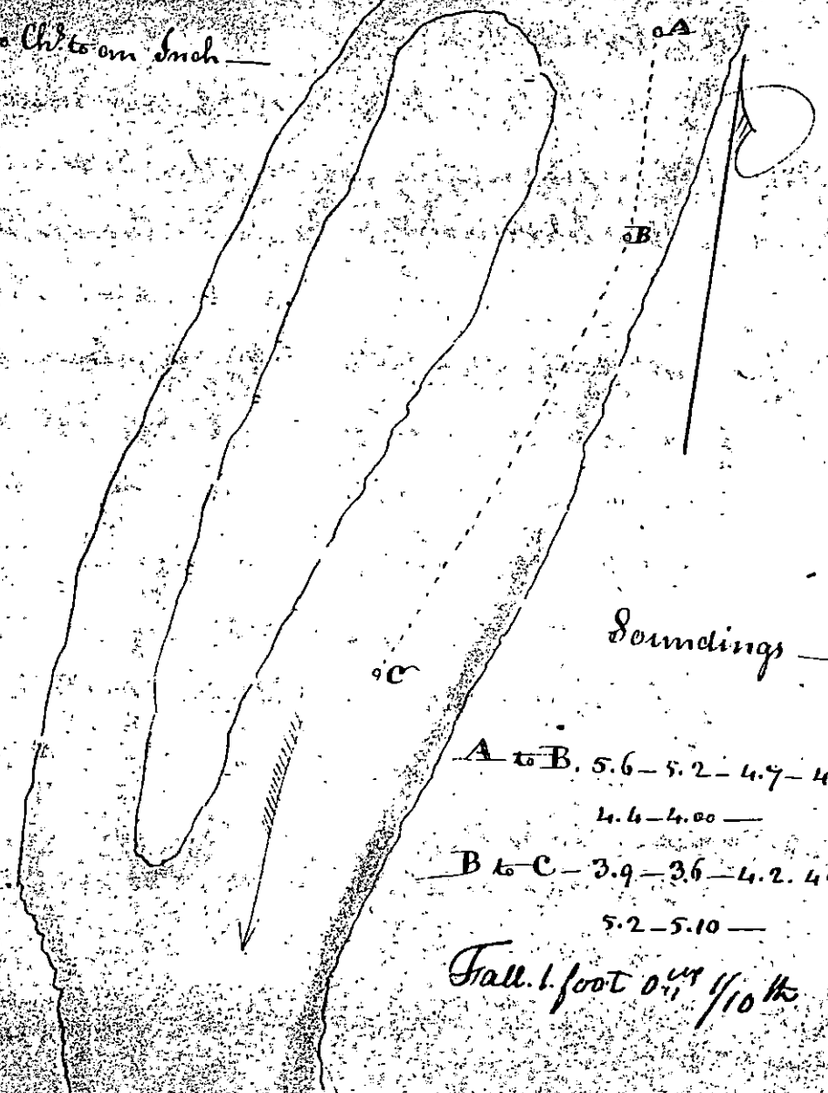
Hall 2 feet 11 inches 5/10 15/11

Remarks

This Island forms two Shoals — the first commencing a little above the upper point of the Island & extends to the Landing opposite to the Town. The other Commences at the bar formed by Wheeling Creek and extends a little below the lower point of the Island. There are a number of logs and rocks in and near the Channel above the Town, with several logs or snags below. Although the bed of the Channel appears to be gravel, it is not improbable, that in deepening the Channel to six feet some rock would require to be excavated.

Shoal No 33 — Boggs Island.

Scale to Chain to an Inch —



Soundings — from —

A to B. 5.6 — 5.2 — 4.7 — 4.5 — 3.10 —
4.4 — 4.00 —

B to C — 3.9 — 3.6 — 4.2. 4.3 — 4.6 — 5.4
5.2 — 5.10 —

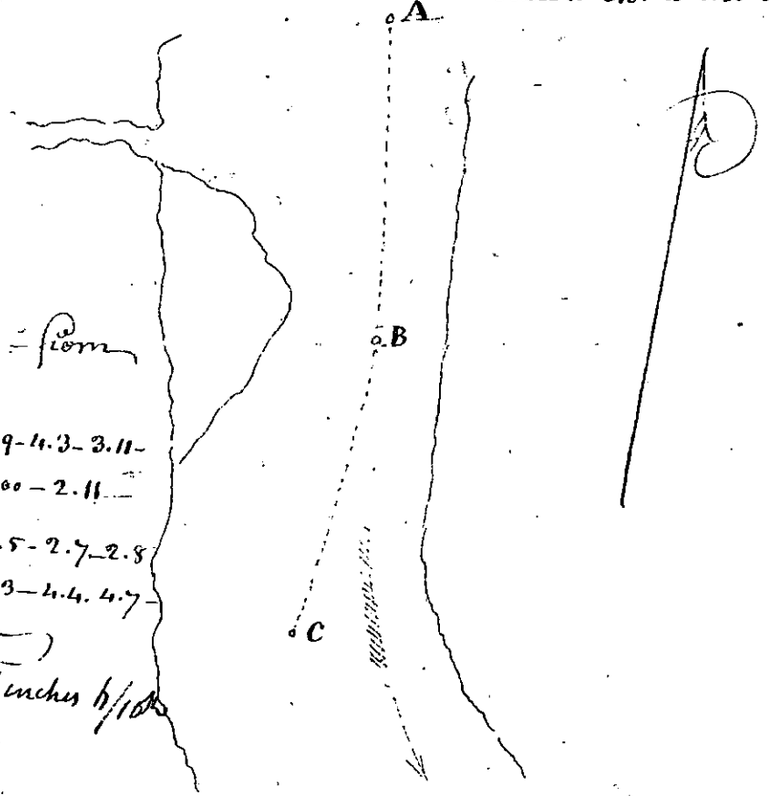
Fall. 1 foot 0 in 1/10 th.

Remarks.

This Shoal is two miles below Wheeling. The bottom of the Channel consists of small gravel, but there are a number of logs & snags in and near it.

Shoal N.º 34 — McMahon's Shoal

Scale 10 Ch.s to an Inch



Soundings from

to B. 5.00 – 4.9 – 4.3 – 3.11 – 3.5 – 3.00 – 2.11 –

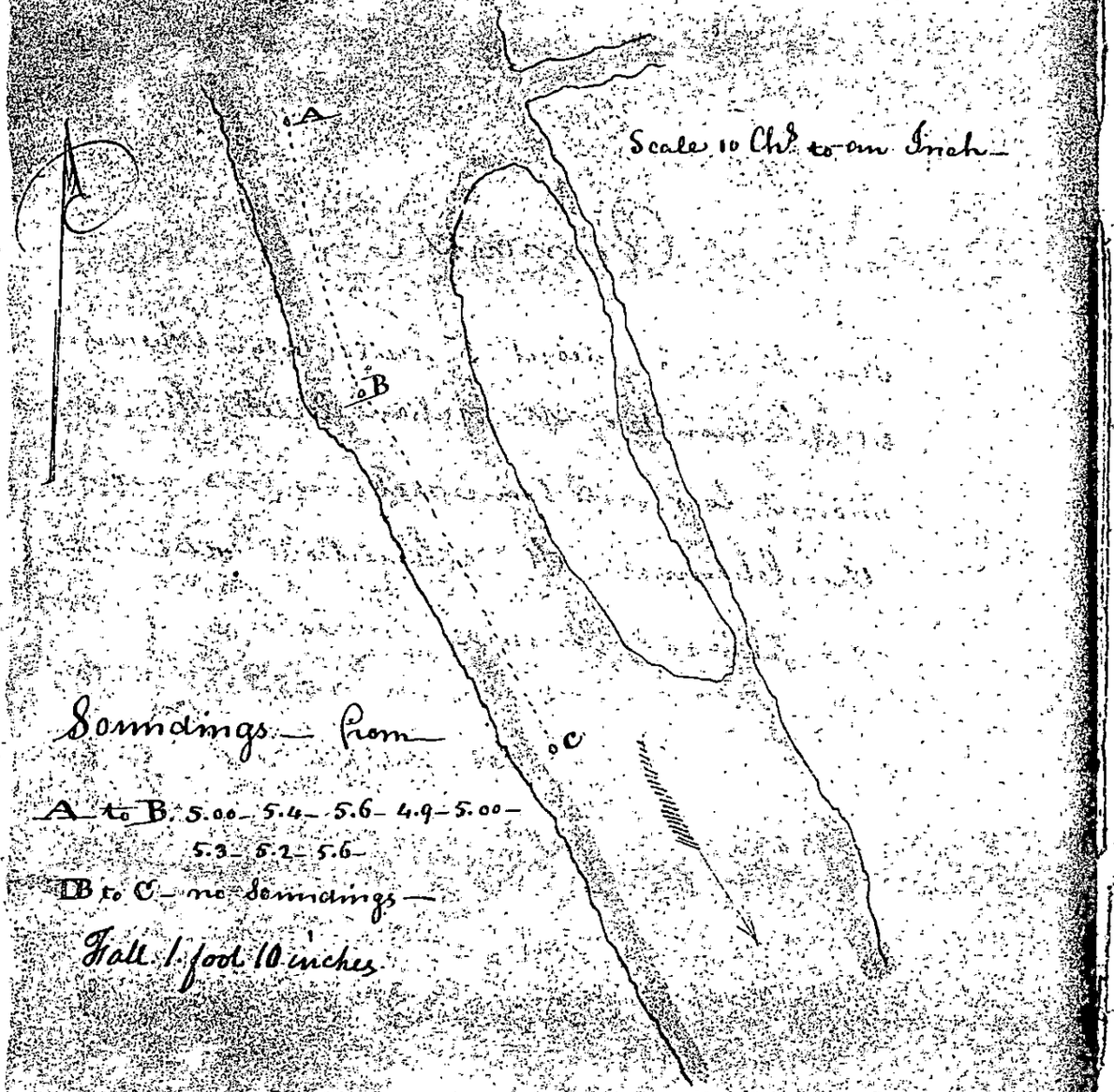
to C – 2.10 – 2.5 – 2.7 – 2.8 – 2.9 – 3.3 – 4.4. 4.7 – 5.1 –

Fall 1. foot 8 inches 6/10

Remarks

This Shoal is about 5 miles below Wheeling at the mouth of McMahon's Creek. There are many logs and some rocks in and near the Channel. The obstructions otherwise are formed of small gravel.

Sheet No. 35 – Little Prairie Creek Bar.



Scale 10 Chs to an Inch.

Soundings from

A to B. 5.00 – 5.4 – 5.6 – 4.9 – 5.00 –
5.3 – 5.2 – 5.6

B to C – no soundings –

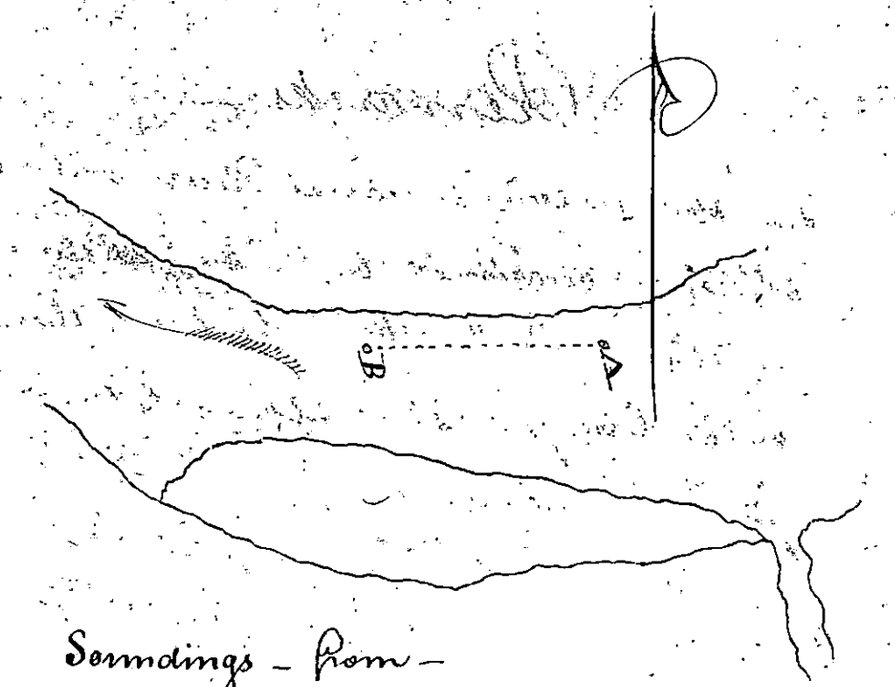
Fall 1 foot 10 inches.

Remarks.

This obstruction is about Eleven miles below Wheeling, occasioned by a bar at the mouth of little Grave Creek. – The bed of the river on the Channel side appears to be of lime stone rock.

Shoal N° 36 — Big Grave Creek Bar.

Scale 10 Chs. to an Inch —



Soundings — from —

A B. 6.6 — 5.6 — 6.2 — 6.00

Fall 1 foot 1 inch from

Remarks.

This Shoal commences at the mouth of big Grave Creek 12 miles below Wheeling — The fall is pretty rapid: but about mid the bed of the river formed of gravel. The passage is safe, once the Shoal can scarcely be considered an obstruction.

Sheet N°37 — Captina Island Bar —

Scale 10 Ch.s to an Inch

Soundings — from

A to B. 5.9 - 5.7 - 4.11 - 4.8 -
4.3 - 4.2 - 5.2 —

B to C - 7.9 —

C to D. 6.00 - 5.6 - 4.10 - 4.4 - 4.4 -
3.9 - 3.6 - 3.6 - 3.4 - 3.1 -
2.9 - 2.8 - 2.7 - 2.7 - 2.4 -
2.6 —

D to E. 2.8 - 2.8 - 2.5 - 2.6 - 2.7 -

E to F. 4.00 - 4.8 - 4.6 - 4.4 -
9.00

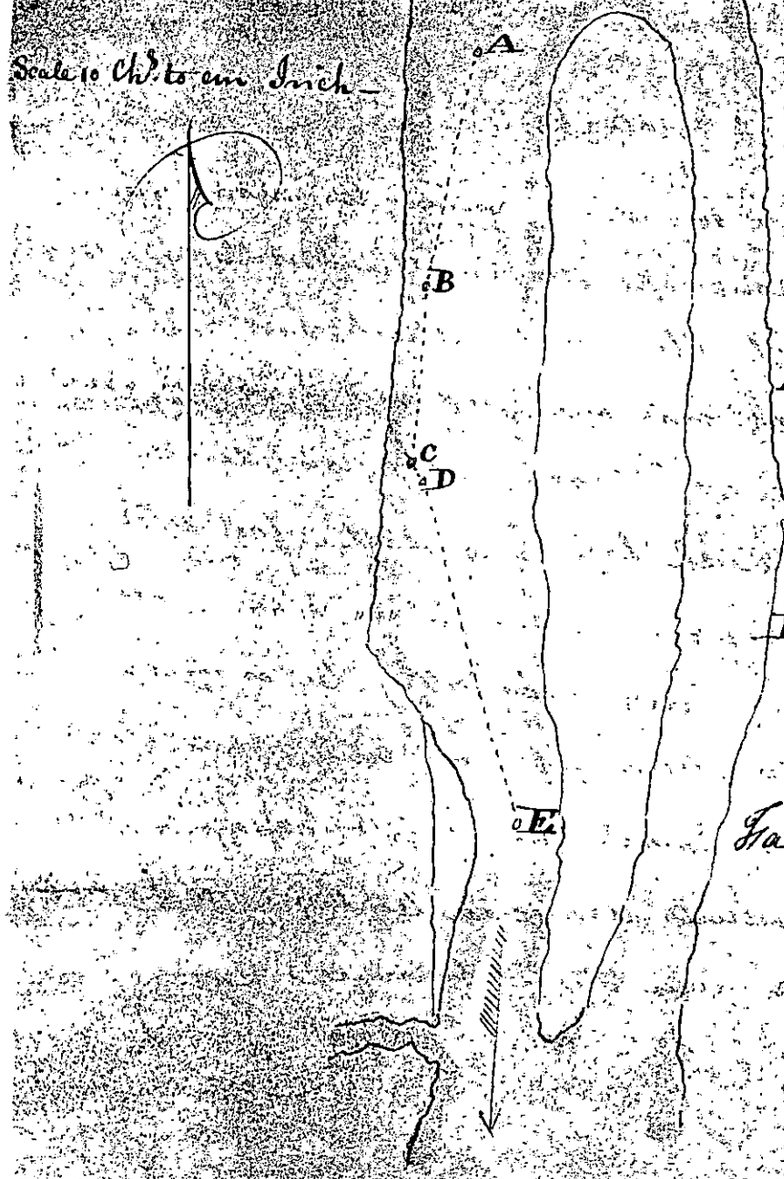
Fall 3 feet 11 inches 3/10ths

Remarks.

This may be considered among the most difficult and dangerous obstructions in the Ohio River, the Channel on the Virginia Shore being the safest and one most used, having an entire gravel Bottom, but considerably obstructed with logs, and at the foot with small Sand bars. — The Ohio side of the Island can unquestionably be improved with the least expense and make the Shortest and much the safest passage. It is now rendered dangerous by some rocks and in and near the Channel

Shoal № 38 Fish Creek Island & Bar

Scale 10 Ch.s to an Inch



Soundings - from

A to B. 4.7 - 4.1 - 3.9 - 3.4 -
3.2 - 2.11 - 3.00 - 3.00
3.3 - 3.4 - 3.3 —

B to C - 3.4 - 4.4 - 4.7 - 3.10

C to D - 2.9 - 3.4 - 3.4 - 3.2 -

D to E. 3.3 - 3.2 - 3.1 - 2.11 -
2.11 - 3.1 - 4.4 - 4.8 -
4.7 - 4.9 - 5.1 - 5.00 -
5.3 -

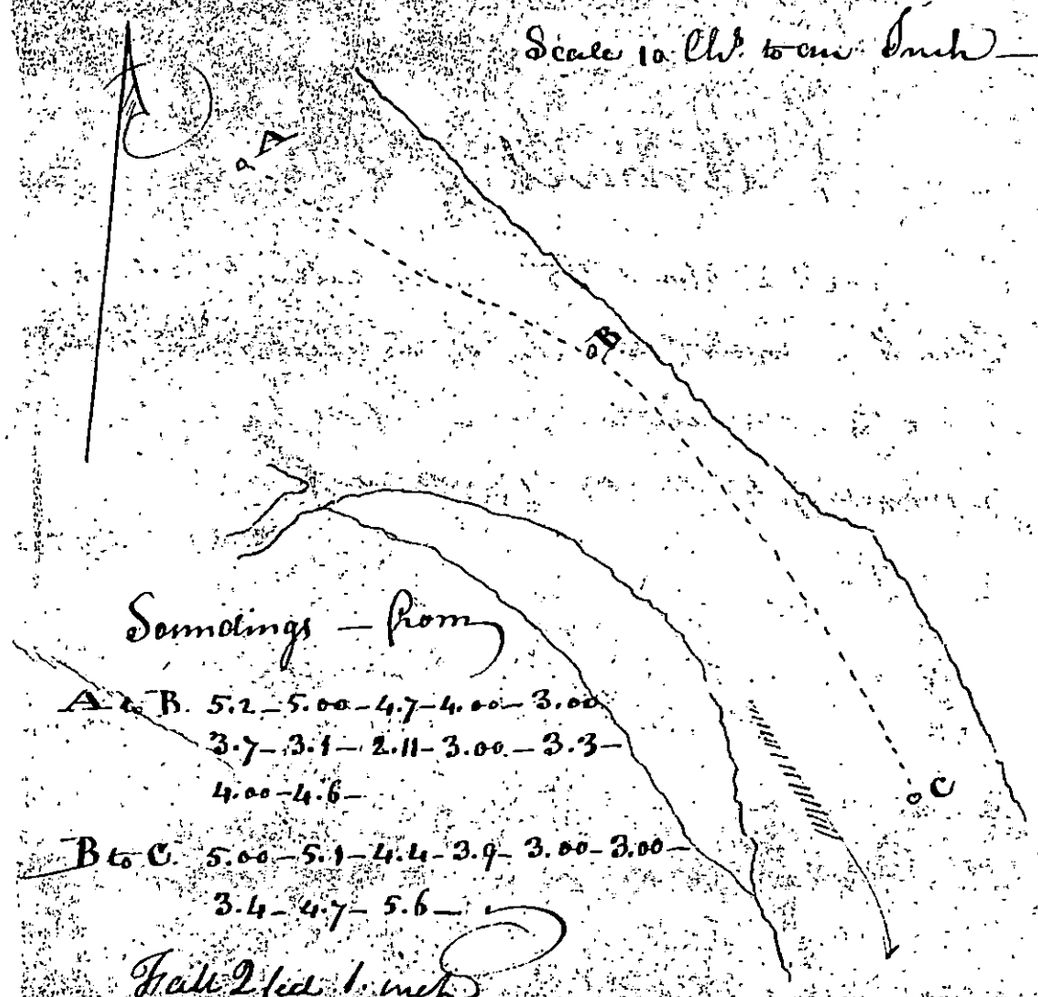
Fall 1 foot 8 inches

Remarks.

This shoal is about 25 miles below Wheeling. The bar consists entirely of gravel, and forms no other obstruction there than what arises from a want of water on the bar.

Shoal No. 39 — Opposum Bar —

Scale 10 Ch. to an Inch —



Soundings — from

A to B. 5.2 — 5.00 — 4.7 — 4.00 — 3.00
3.7 — 3.1 — 2.11 — 3.00 — 3.3 —
4.00 — 4.6 —

B to C. 5.00 — 5.1 — 4.4 — 3.9 — 3.00 — 3.00 —
3.4 — 4.7 — 5.6 —

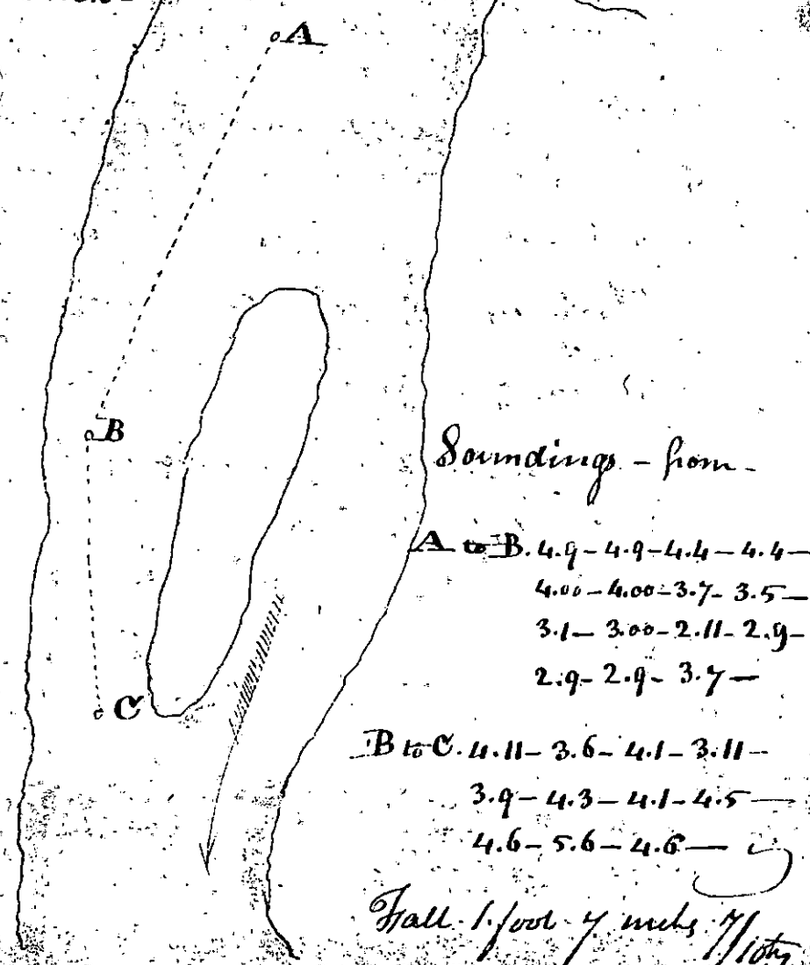
Tide 2 feet 1 inch

Remarks.

This Shoal lies between Fish Creek and Fishing Creek. the bar is formed of Sand and gravel, and there are a number of trees, logs & snags in and near the Channel

Shoal No. 40 — Fishing Creek Bar

Scale 10 Ch.s to an Inch —



Soundings — from —

A to B. 4.9 – 4.9 – 4.4 – 4.4 —
4.00 – 4.00 – 3.7 – 3.5 —
3.1 – 3.00 – 2.11 – 2.9 –
2.9 – 2.9 – 3.7 —

B to C. 4.11 – 3.6 – 4.1 – 3.11 –
3.9 – 4.3 – 4.1 – 4.5 —
4.6 – 5.6 – 4.6 —

Fall 1 foot 7 inchs 7/10ths

Remarks.

This obstruction is occasioned by a large gravell bar formed about 80 rods below the mouth of Fishing Creek. The bottom of the Channel is smooth & safe except what arises from a deficiency of water.

Shoal No. 41 Peyton's Island

Scale 10 Chs. to an Inch

Soundings — from

A — 6.6 — no other Soundings.

Fall 2 inches, 9/10th

Remarks.

This Island lies at the head of long reach and is an exception to the other Islands in the river, in not occasioning any fall of water. It can scarcely be considered an obstruction, as there is six feet water the shoalest part of the bar.

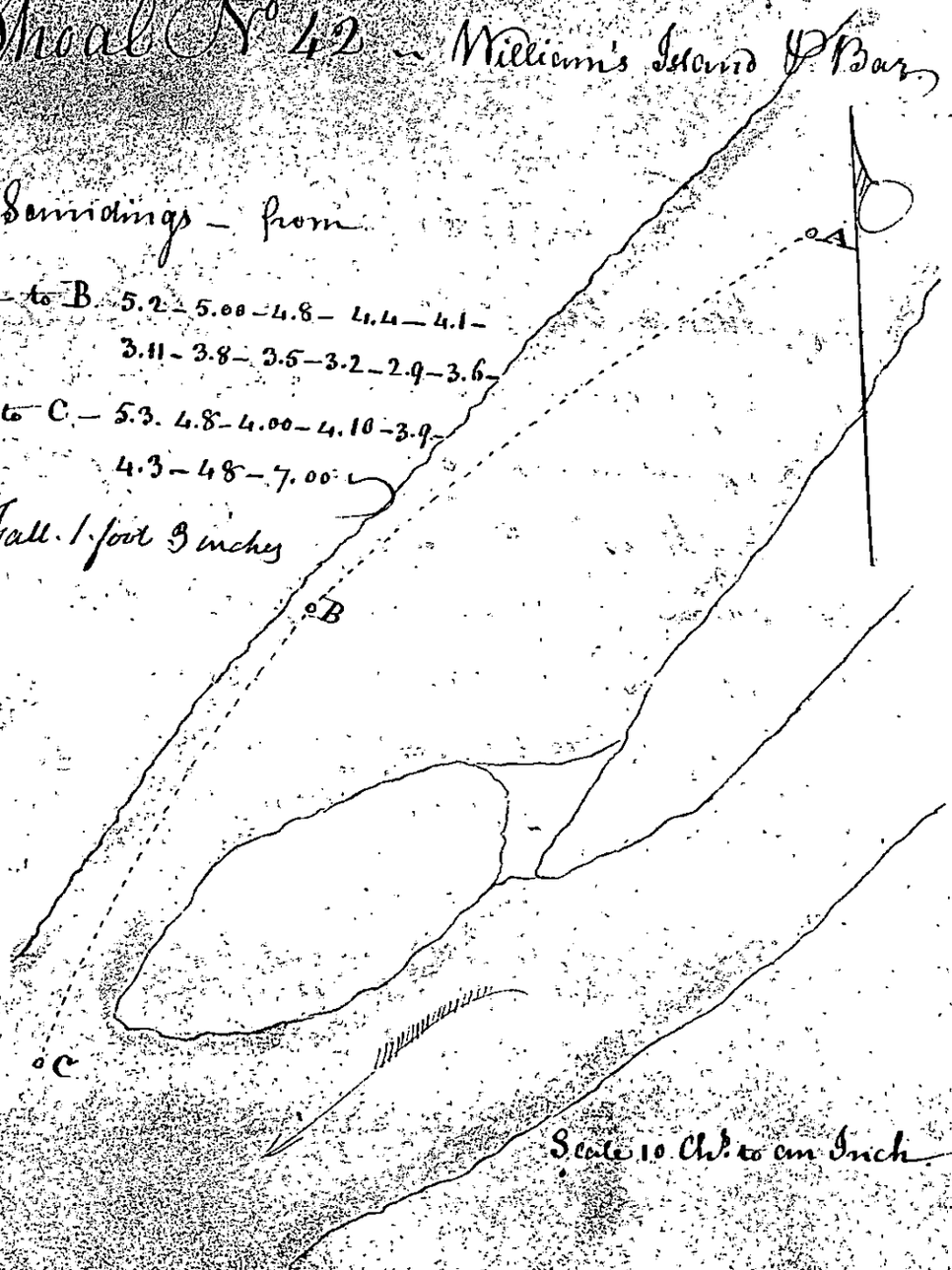
Shoal No 42 — William's Island Bar

Soundings — from

A to B 5.2 — 5.00 — 4.8 — 4.4 — 4.1 —
3.11 — 3.8 — 3.5 — 3.2 — 2.9 — 3.6 —

B to C — 5.3. 4.8 — 4.00 — 4.10 — 3.9 —
4.3 — 48 — 7.00

Fall. 1 foot 3 inches



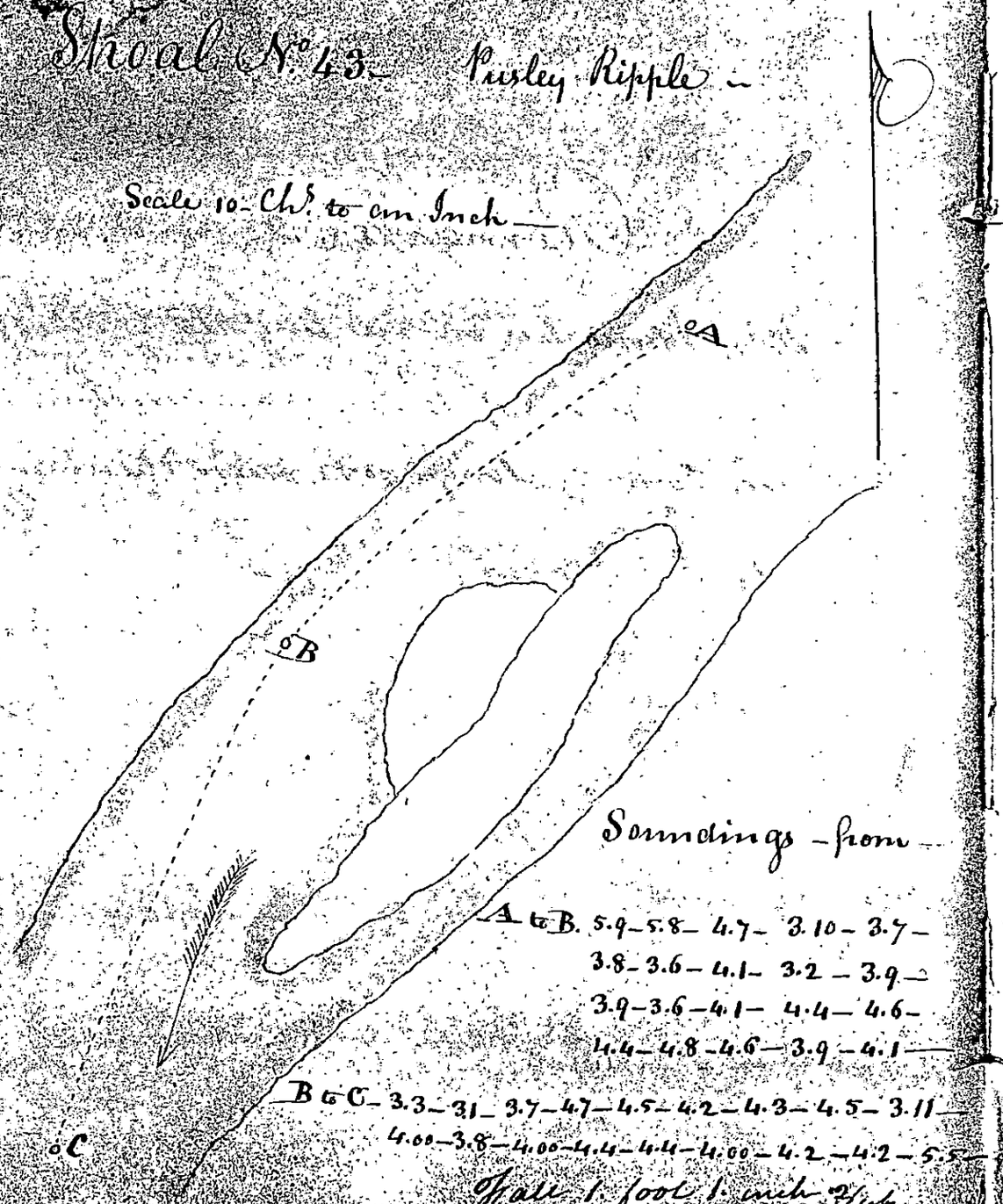
Scale 10 Ch. to an Inch

Remarks.

This Island lies on the long reach, the Shoal is formed of Sand and gravel. There are some Sandstone rocks, near the Channel, and a few logs in the Shoal.

Shoal No 43 Pursley Ripple

Scale 10 Chs to an Inch



Soundings from

A & B. 5.9 – 5.8 – 4.7 – 3.10 – 3.7 –
3.8 – 3.6 – 4.1 – 3.2 – 3.9 –
3.9 – 3.6 – 4.1 – 4.4 – 4.6 –
4.4 – 4.8 – 4.6 – 3.9 – 4.1 –

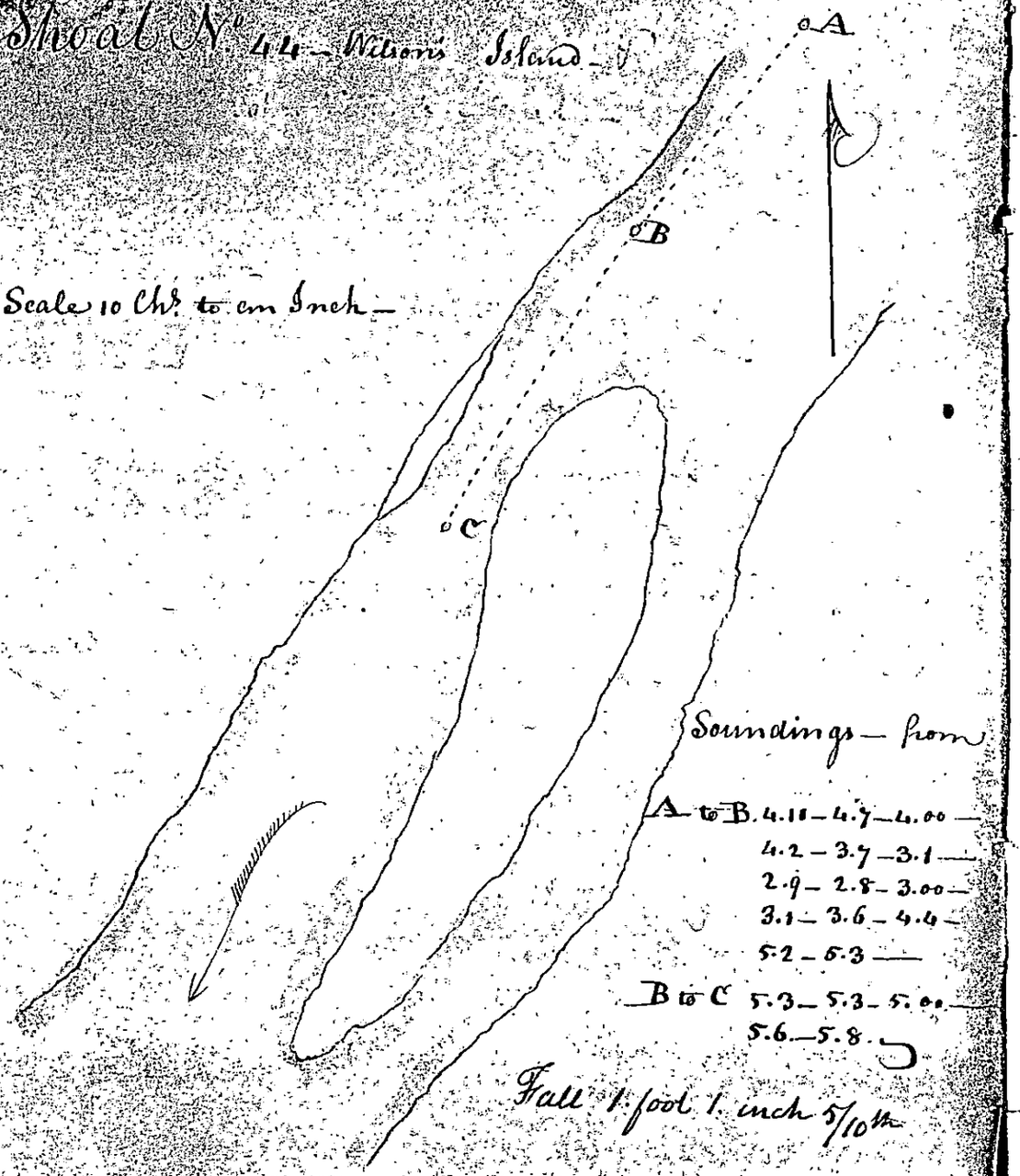
B & C – 3.3 – 3.1 – 3.7 – 4.7 – 4.5 – 4.2 – 4.3 – 4.5 – 3.11 –
4.00 – 3.8 – 4.00 – 4.4 – 4.4 – 4.00 – 4.2 – 4.2 – 5.5 –

Vale 1 foot 1 inch 2/10ths

Remarks.

This is also in the long reach. She bars are formed of sand and gravel, with some few logs in & near the Channel.

Shoal N° 44 – Nelsons Island –



Scale 10 Chs to an Inch –

Soundings – from

A to B. 4.10 – 4.7 – 4.00 –
4.2 – 3.7 – 3.1 –
2.9 – 2.8 – 3.00 –
3.1 – 3.6 – 4.4 –
5.2 – 5.3 –

B to C 5.3 – 5.3 – 5.00 –
5.6 – 5.8.

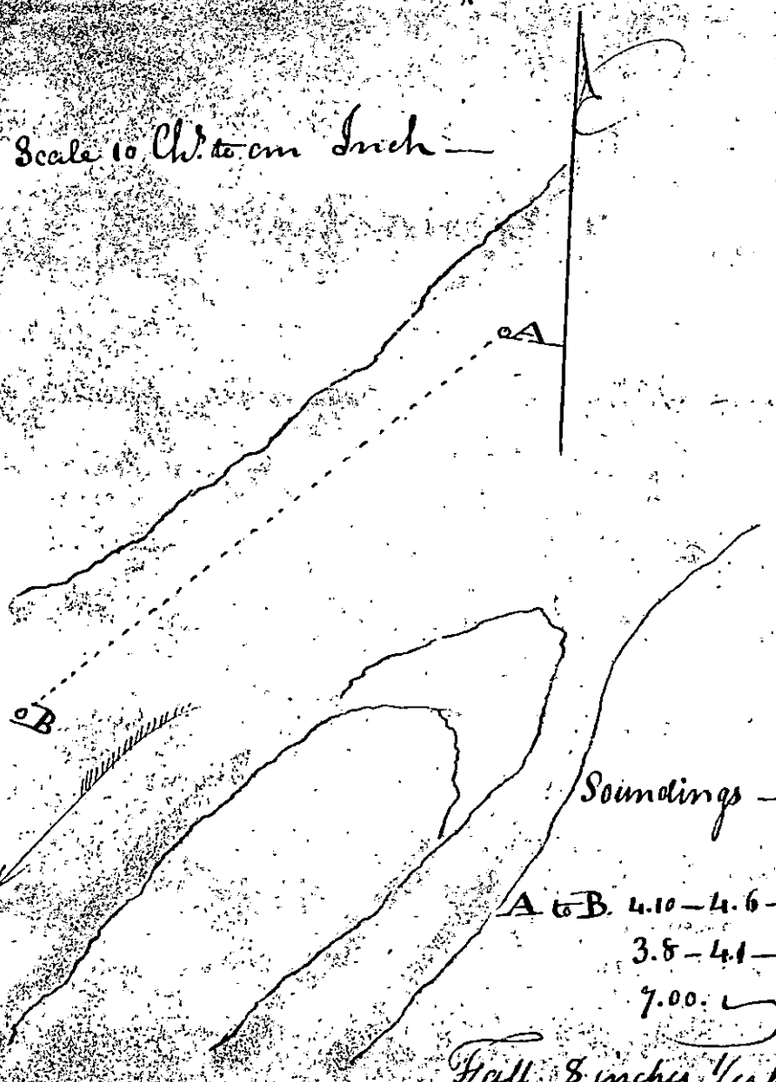
Fall 1 foot 1 inch 5/10ths

Remarks.

This Shoal is also on the long reach, the bottom of the Channel is principally formed of Sand and gravel – There are a few logs & some rocks in & near the Channel.

Shoal No. 45 — John William Wilson's Island.

Scale 10 Ch.s to an Inch —



Soundings — from —

A to B. 4.10 — 4.6 — 4.2 — 3.7
3.8 — 4.1 — 4.8 — 5.00
7.00.

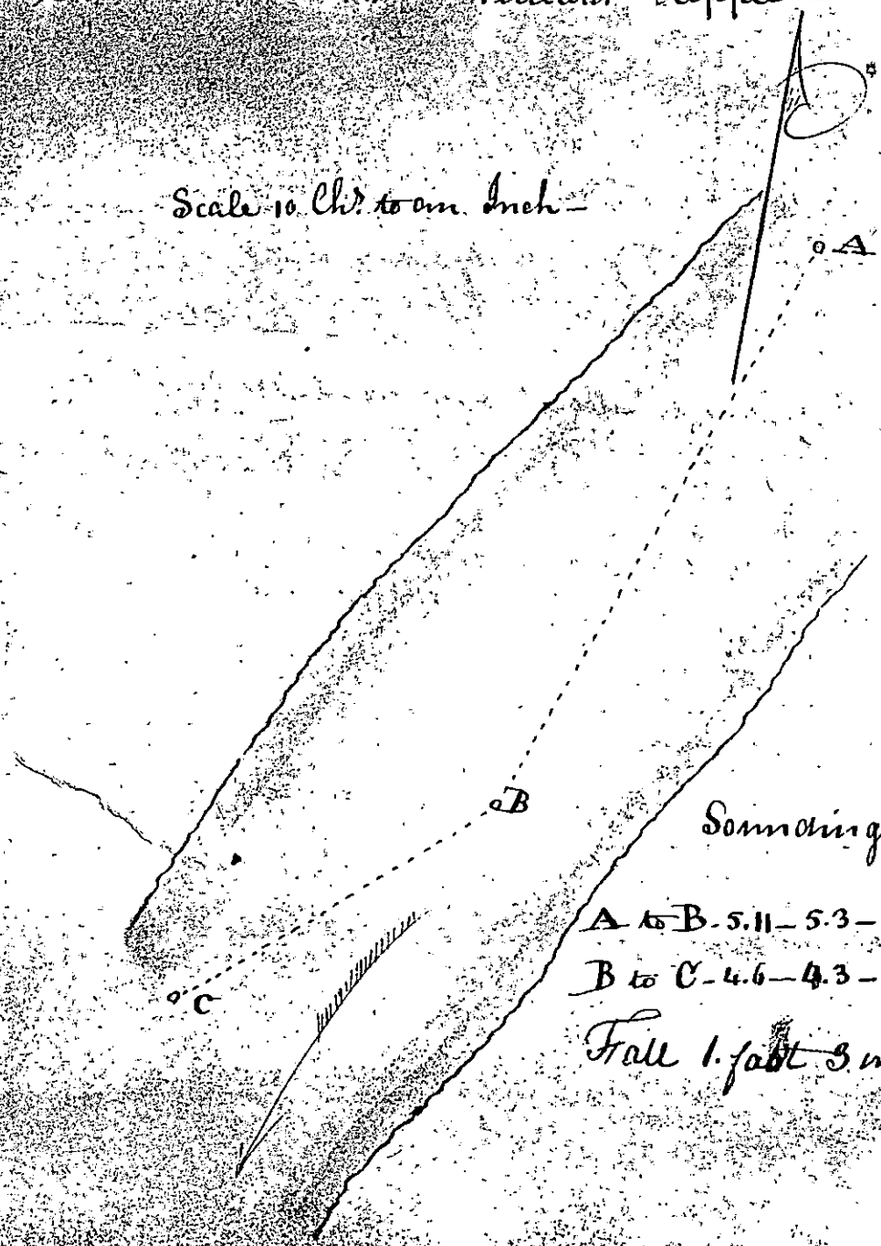
Fall 8 inches 1/10 ft

Remarks.

This Shoal is about one mile below the one last described. The bar is formed of Gravel, but there are some dangerous logs in the Channel.

Shoal No. 46 — Petticoat Ripple —

Scale 10 Chs. to an Inch —



Soundings — from

A to B — 5.11 — 5.3 — 5.1 — 4.10 —

B to C — 4.6 — 4.3 — 4.00 — 3.7 — 5.3 —

Fall 1. foot 3 inches 6/10ths

Remarks

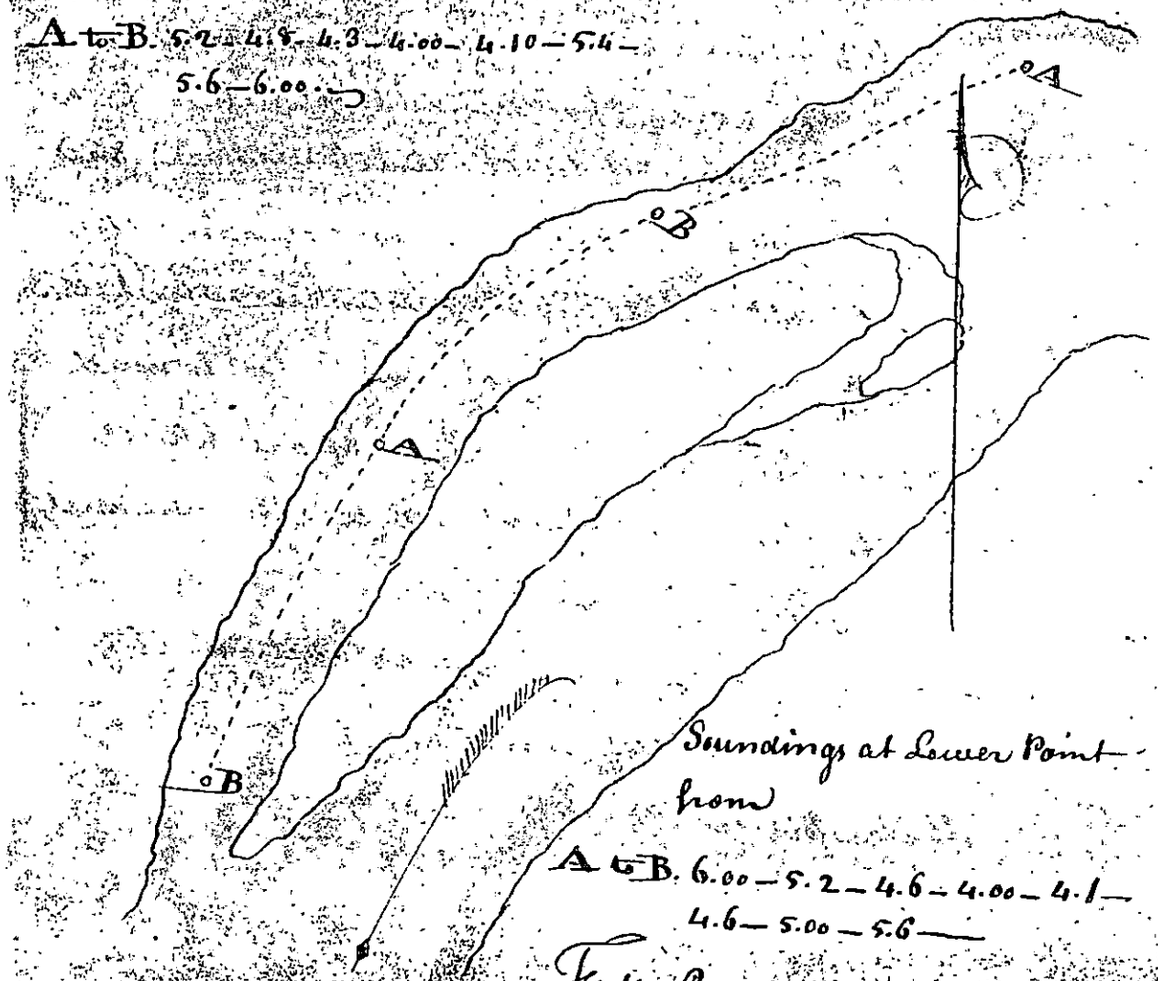
This Shoal lies at or near the foot of Long Reach 22 miles above Marietta, and though not dangerous is a very troublesome Shoal, there is a bar formed parallel with the Ohio Shore, and about six or eight poles from it extending the whole length of the Ripple, between which and the bank there is a good and safe Channel of about five feet water, except at one place near the foot of the Shoal, where this Channel is obstructed for about 4 poles with logs and gravel. from this point of obstruction the bar extends across the Ohio to the Virginia Shore, formed of sand and gravel.

Shoal No 47 — Little Bat Island.

Scale 10 Chs. to an Inch

Soundings at upper point from

A to B. 5.2 — 4.8 — 4.3 — 4.00 — 4.10 — 5.4 — 5.6 — 6.00



Soundings at Lower Point from

A & B. 6.00 — 5.2 — 4.6 — 4.00 — 4.1 — 4.6 — 5.00 — 5.6 —

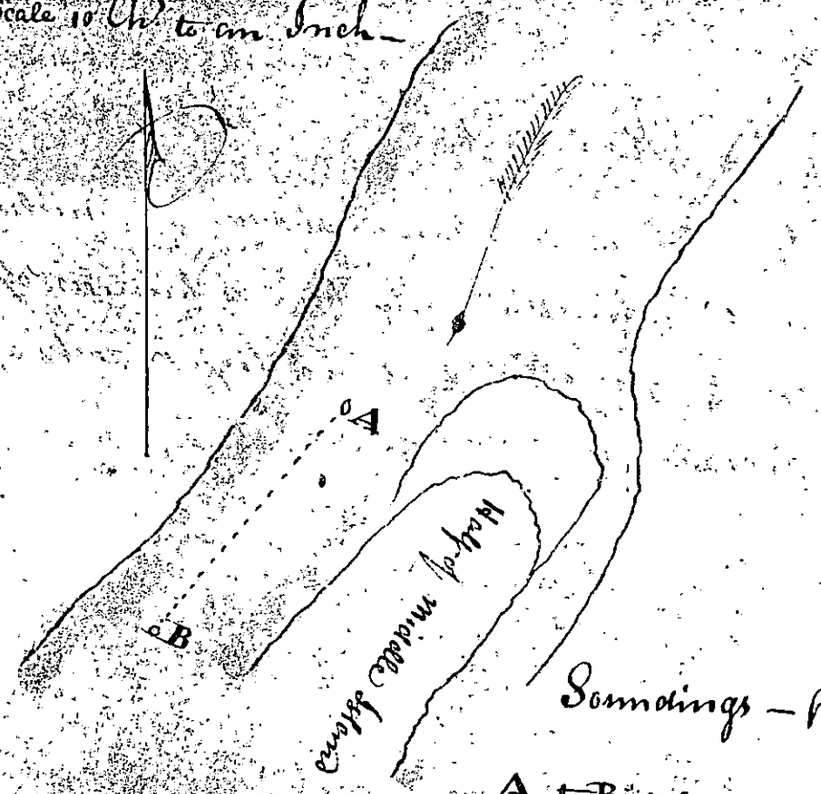
Fall 2 inches 5/10ths

Remarks.

This Island and bar is about miles above Manetta — The bar is formed of loose Gravel & and no top or rocks appear to obstruct the Channel.

Shoal No 48 — Middle Island & Bars —

Scale 10 Chs to an Inch —



Soundings — from —

A to B. 4.6 — 5.00 — 4.6 — 4.6 —
5.00 — 5.3 — 5.4 —

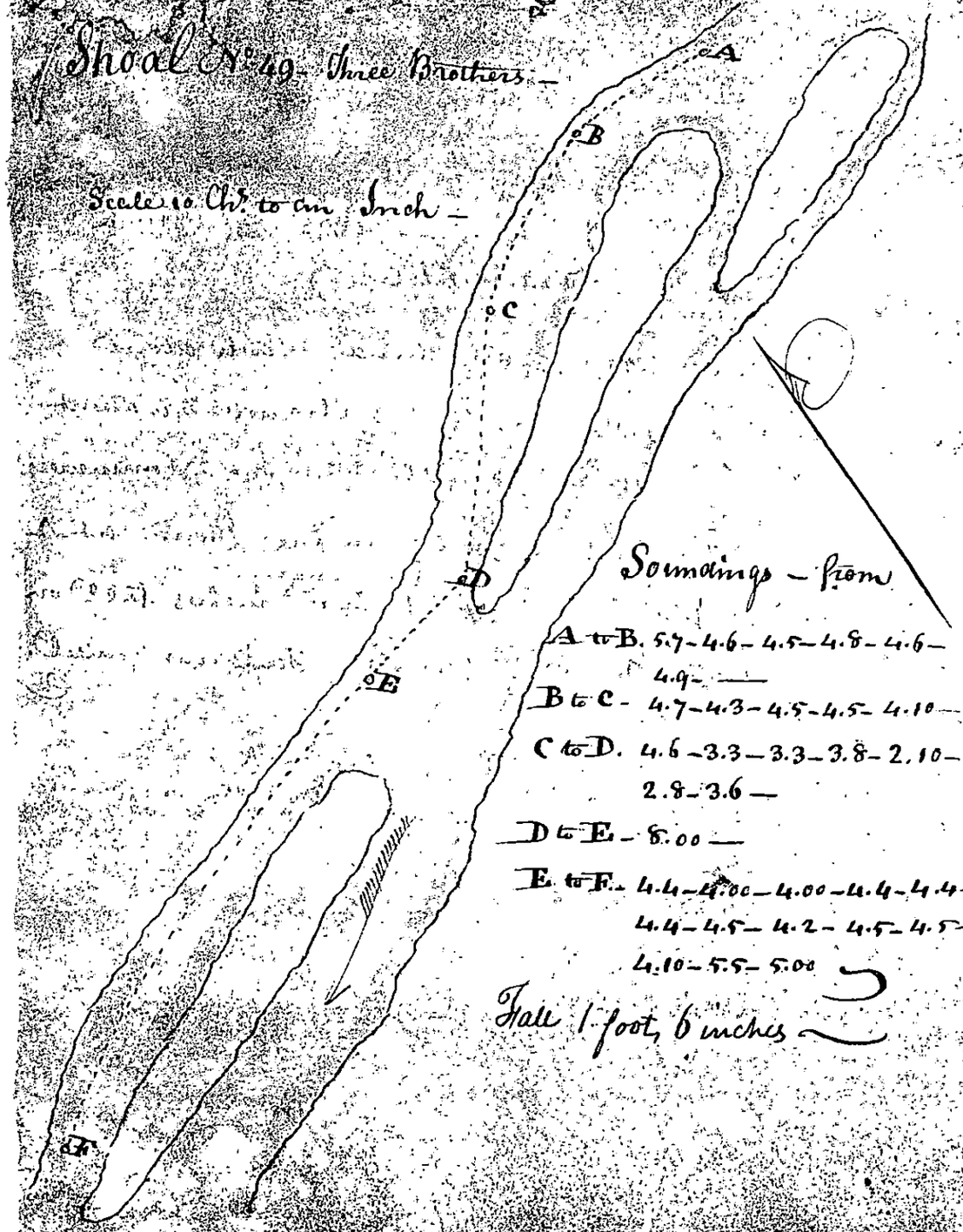
Tall. 3 Inches

Remarks.

The upper point of this Island which alone forms any obstructions in the Channel is about above Manilla. The Shoal commences as low down as the Trees on the Island at A in the Plat there are but three inches fall on the bars — The bar is formed of Sand and gravel

Shoal No. 49 - Three Brothers -

Scale 10 Chs. to an Inch -



Soundings - from

A to B. 5.7 - 4.6 - 4.5 - 4.8 - 4.6 - 4.9 -

B to C - 4.7 - 4.3 - 4.5 - 4.5 - 4.10 -

C to D. 4.6 - 3.3 - 3.3 - 3.8 - 2.10 - 2.8 - 3.6 -

D to E - 8.00 -

E to F. 4.4 - 4.00 - 4.00 - 4.4 - 4.4 - 4.4 - 4.5 - 4.2 - 4.5 - 4.5 - 4.10 - 5.5 - 5.00

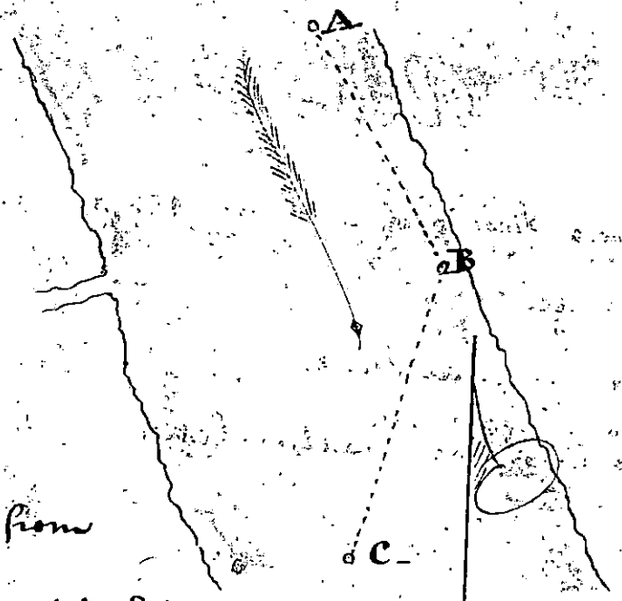
Fall 1 foot, 6 inches

Remarks.

These Shoals are about 12 miles above Manitou - The bars are entirely formed of gravel and sand. - We discovered neither rocks or logs in the channel.

Shoal No 50 — Carpenters Bar

Scale 10 Chs to an Inch —



Soundings — from

A to B — 4.6 — 4.5 — 4.7 — 3.10 —
3.5 — 3.00 — 2.11 — 3.00
3.06 — 2.10 —

B to C. 3.00 — 3.1 — 3.2 — 2.7 — 4.6 —
5.00 — 4.10 — — —

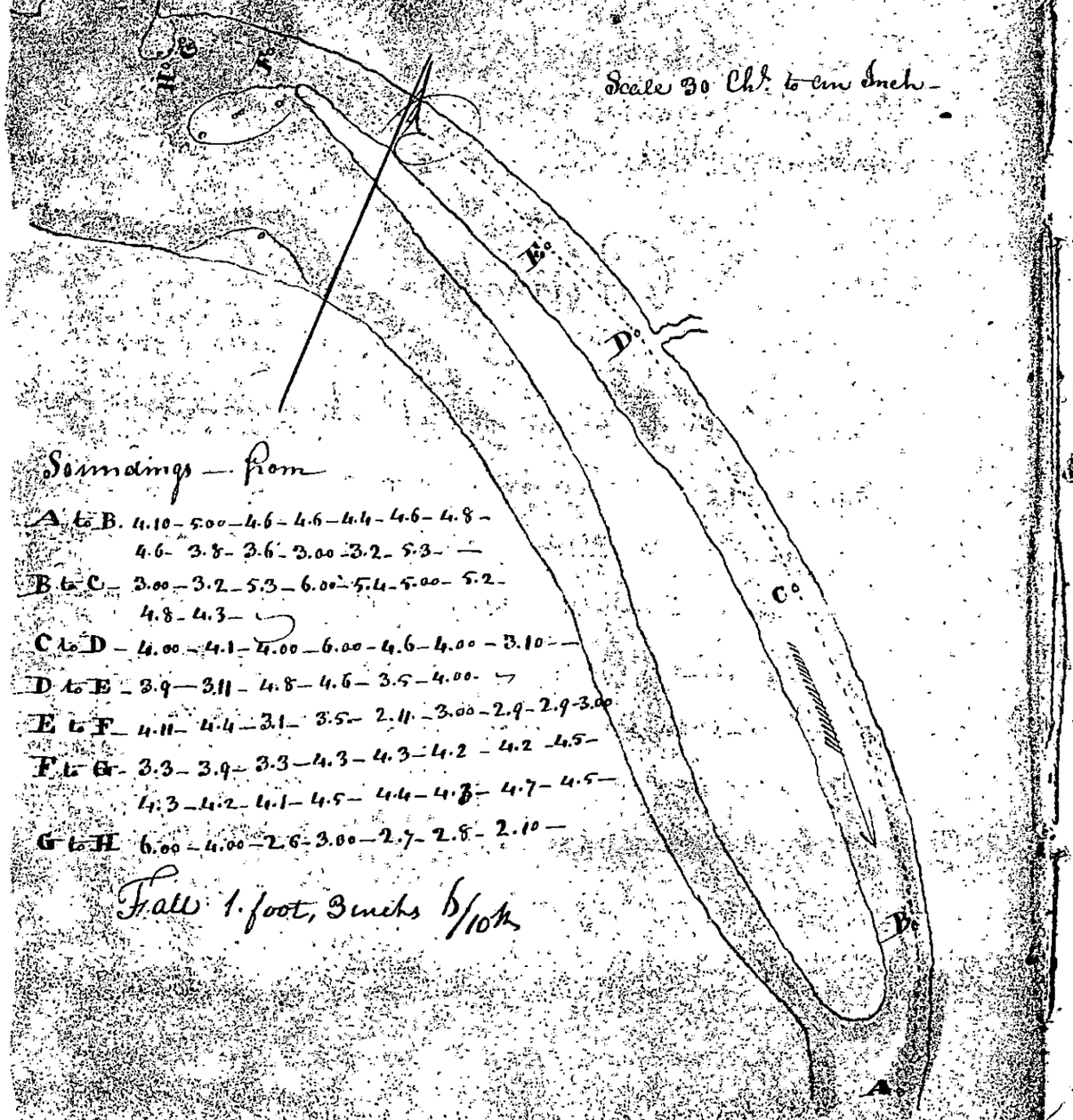
Fall 4 inches 5/10 ths

Remarks.

This Shoal is five miles above Manilla & opposite the mouth of Carpenters Creek — It is formed by a gravel bar extending from one bank of the river to the other — and may be numbered among the most troublesome Shoals, on account of the scarcity of water on some parts of the bar. It would however require no great labour to open a safe Channel through this Shoal.

Sheet No 51 Marietta & Lowis Bars

Scale 30 Ch.s to an Inch



Soundings — from

A to B. 4.10 - 5.00 - 4.6 - 4.6 - 4.4 - 4.6 - 4.8 - 4.6 - 3.8 - 3.6 - 3.00 - 3.2 - 5.3 -

B to C. 3.00 - 3.2 - 5.3 - 6.00 - 5.4 - 5.00 - 5.2 - 4.8 - 4.3 -

C to D - 4.00 - 4.1 - 4.00 - 6.00 - 4.6 - 4.00 - 3.10 -

D to E - 3.9 - 3.11 - 4.8 - 4.6 - 3.5 - 4.00 -

E to F - 4.11 - 4.4 - 3.1 - 3.5 - 2.11 - 3.00 - 2.9 - 2.9 - 3.00

F to G - 3.3 - 3.9 - 3.3 - 4.3 - 4.3 - 4.2 - 4.2 - 4.5 - 4.3 - 4.2 - 4.1 - 4.5 - 4.4 - 4.3 - 4.7 - 4.5 -

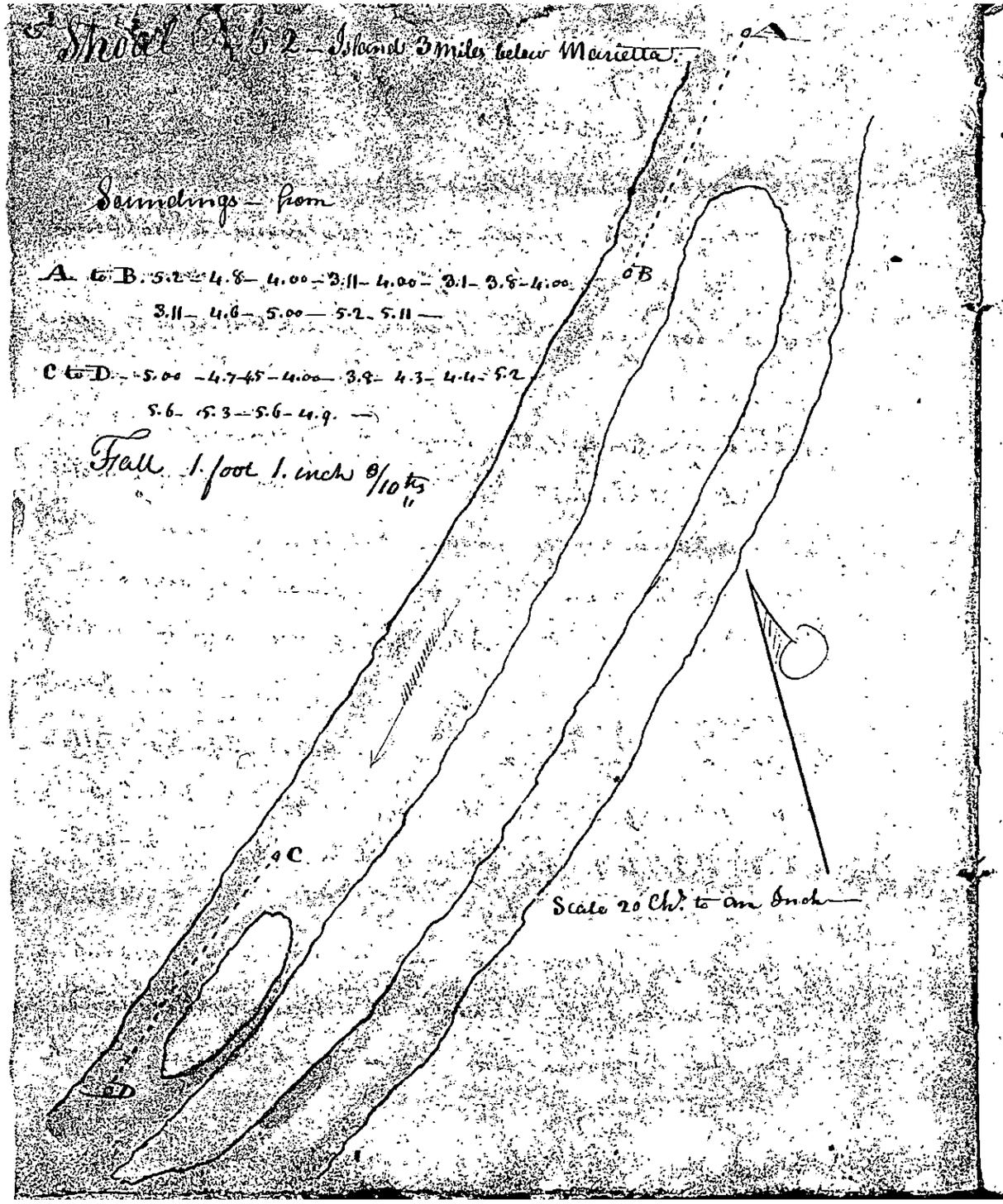
G to H 6.00 - 4.00 - 2.6 - 3.00 - 2.7 - 2.8 - 2.10 -

Fall 1. foot, 3 Inches 6/10th

Remarks —

This Shoal commences about 3 miles above Marietta, and continues to the mouth of the Muskingum — The Channel on the right or Ohio Side of the Island is ~~above~~ Closed used in low water. This is very much obstructed as you approach Marietta with logs & Snags. A pier commences at the lower point of the Island and extends round to the mouth of the Muskingum river forms a short but very difficult passage for boats either ascending or descending the river — The water as you pass up on the Virginia Side of the Island is of good depth until you reach near the head where we took the following Soundings — 4.00 — 4.6 — 3.7 — 2.9 — 3.9 — 3.6 — 3.11 — 3.11 — 3.3 — 3.3 — 3.8 — 3.10 — 4.00 — 3.9 — 2.7 — 2.8 — 2.6 — 2.6 — 3.3 — 4.9 — 6.4 — 5.3 — 4.11 — 4.2 — 4.4 — 4.5 — 4.8 — 4.2 — 4.00 — 2.8 — 2.9 — The bars on the Ohio Side of the Island are unquestionably composed entirely of Gravel while that at the head of the Island on the Virginia Side is thought to have a rock bottom.

Sheet No 52 — Island 3 Miles below Marietta



Soundings — from

A to B. 5.2 — 4.8 — 4.00 — 3.11 — 4.00 — 3.1 — 3.8 — 4.00 —
3.11 — 4.6 — 5.00 — 5.2 — 5.11 —

C to D. — 5.00 — 4.7 45 — 4.00 — 3.8 — 4.3 — 4.4 — 5.2 —
5.6 — 5.3 — 5.6 — 4.9 —

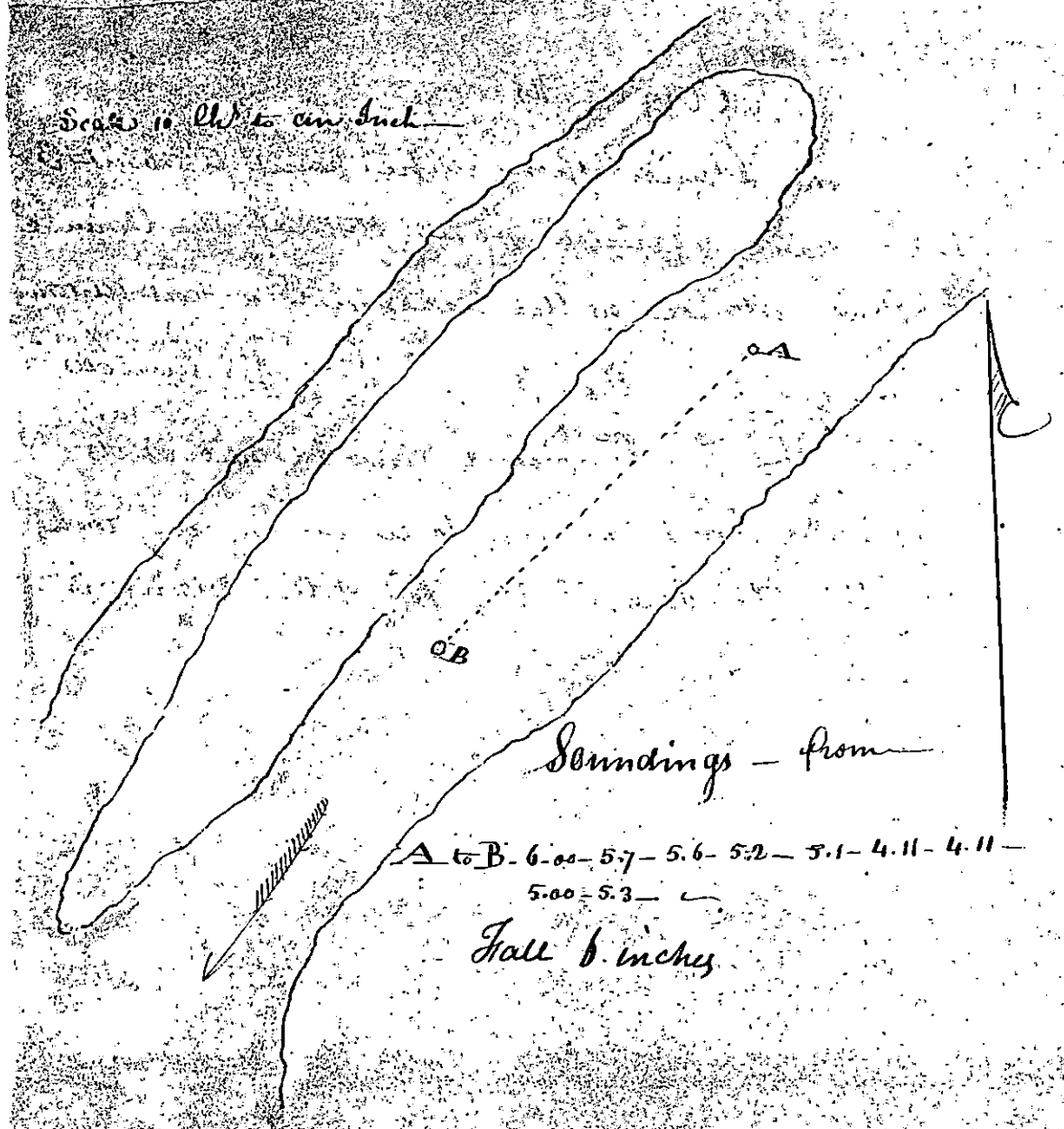
Fall 1 foot 1 inch 8/10 ths

Remarks

This is an Island whose upper point is about 3 Miles below Marietta Partly obstructs the Channel a Short distance at the head & a Short distance near the foot of the Island. It is presumed that a 12 feet Channel can be had at its head without having to remove any rock, while the bar at the foot of the Island, is entirely composed of gravel.

Sheet No 53 Half way Island

Scale 10 Chs to an Inch



Soundings — from

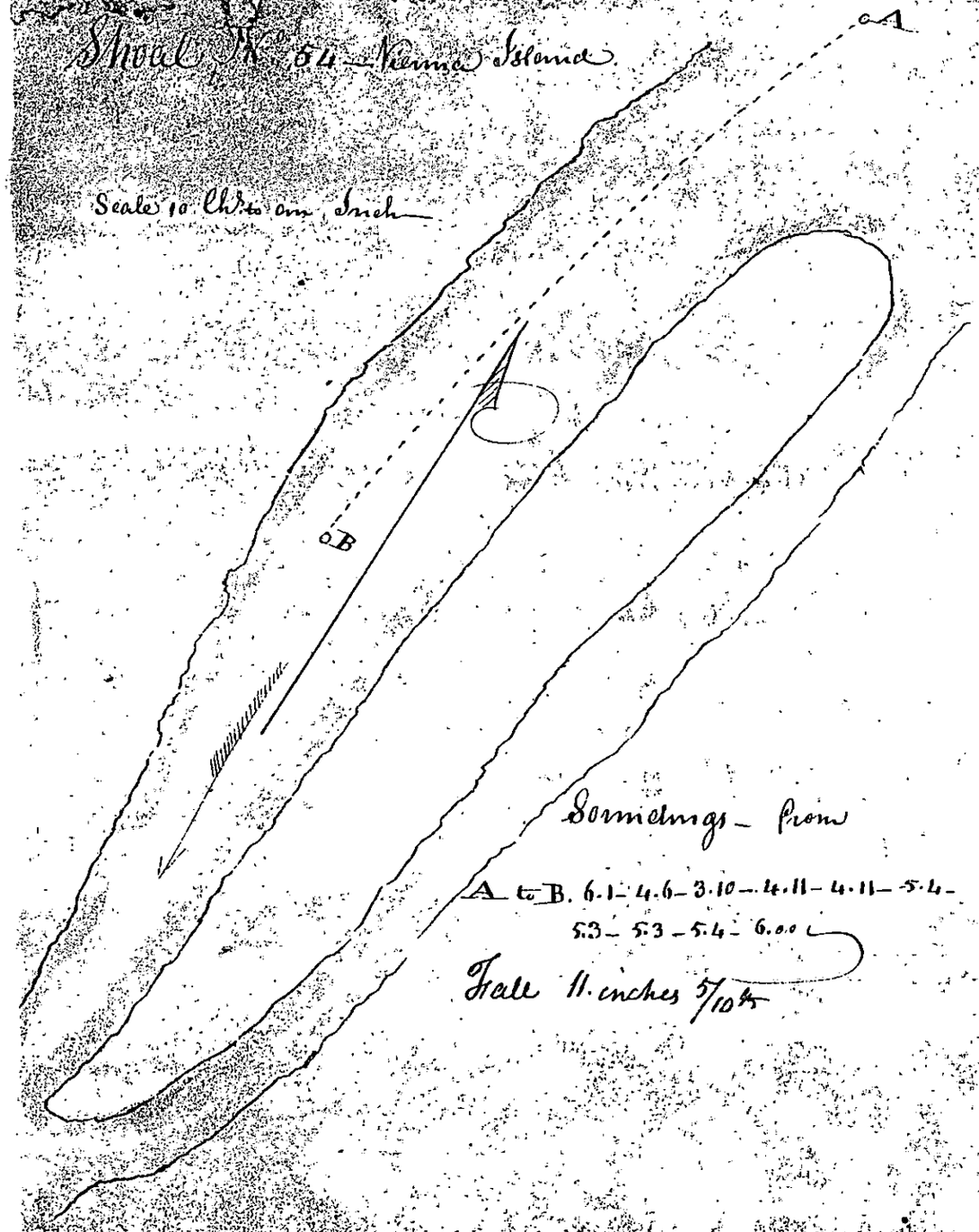
A to B - 6.00 - 5.7 - 5.6 - 5.2 - 5.1 - 4.11 - 4.11 - 5.00 - 5.3 —

Fall 6 inches

Remarks.

This Island is six miles below Marietta, although the Virginia Shore is a rock extending a little into the river, it is believed a six feet Channel can be had without removing any of the rock. There are a few Snags in the Channel.

Shoal No. 54 — Kiamo Island.



Scale 10 Chs. to an Inch

Soundings — From

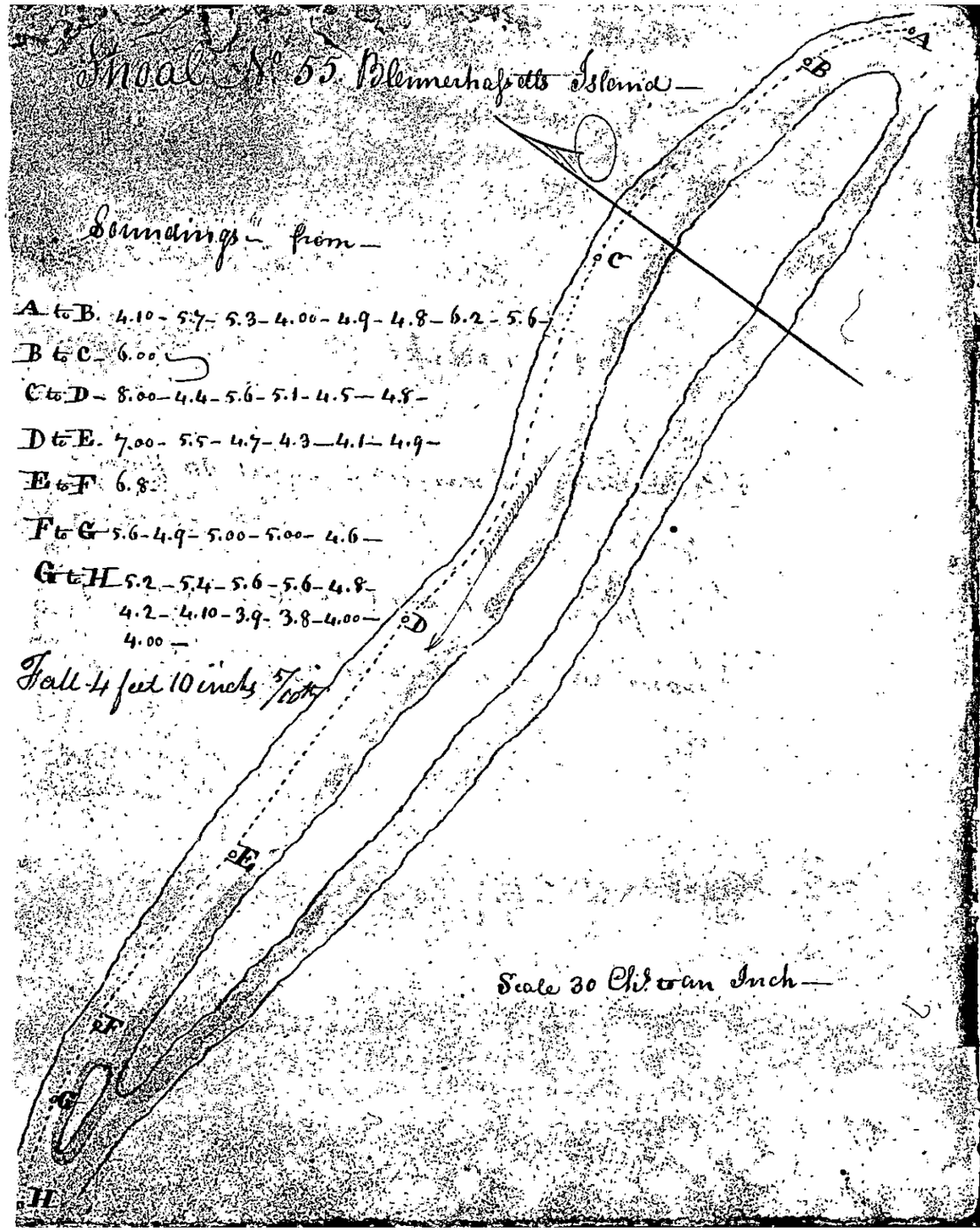
A to B. 6.1 — 4.6 — 3.10 — 4.11 — 4.11 — 5.4 —
5.3 — 5.3 — 5.4 — 6.00

Vale 11 inches 5/10ths

Remarks.

This Island is 9 miles below Manilla. The bar forming this obstruction in the Channel is Shoal and composed entirely of Sand & Gravel.

Shoal No 55 Plemenhafotts Island—



Soundings— from—

A to B. 4.10 - 5.7 - 5.3 - 4.00 - 4.9 - 4.8 - 6.2 - 5.6 -

B to C - 6.00

C to D - 8.00 - 4.4 - 5.6 - 5.1 - 4.5 - 4.8 -

D to E. 7.00 - 5.5 - 4.7 - 4.3 - 4.1 - 4.9 -

E to F 6.8

F to G 5.6 - 4.9 - 5.00 - 5.00 - 4.6 -

G to H 5.2 - 5.4 - 5.6 - 5.6 - 4.8 -
4.2 - 4.10 - 3.9 - 3.8 - 4.00 -
4.00 -

Fall 4 feet 10 inches 5/10ths

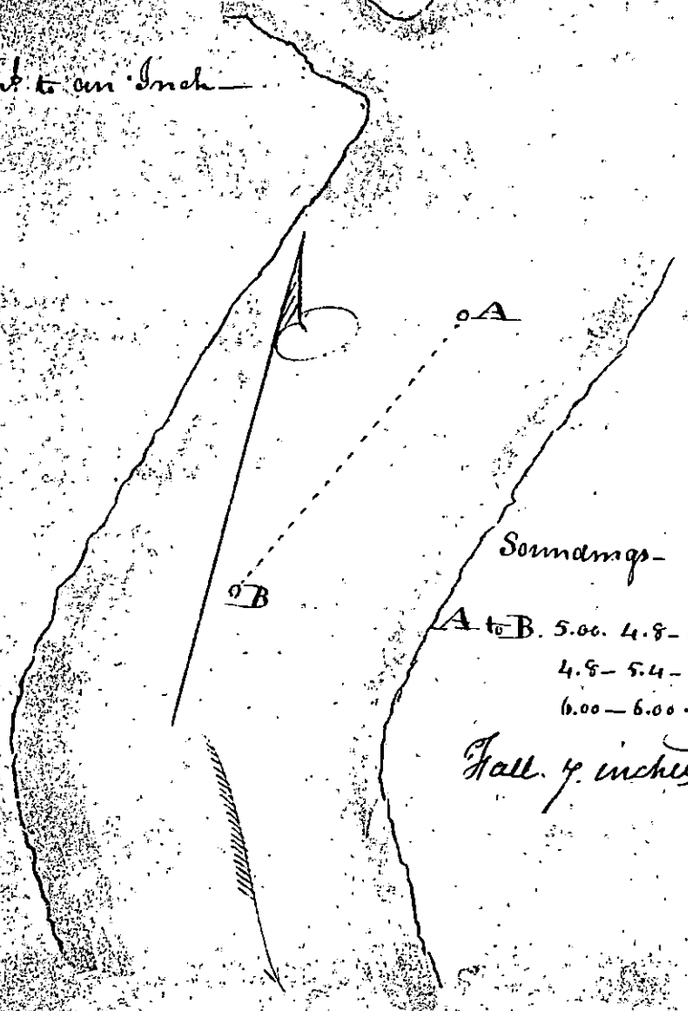
Scale 30 Chs to an Inch—

Remarks.

The upper point of this Island is about one mile below the mouth of little Kennebacha; The Shoals are short gravel bars. there is a sufficiency of Water.

Shoal No. 56

Little Hockhocking Bar.



Soundings from

A to B. 5.00. 4.8 – 4.6 – 4.8 –
4.8 – 5.4 – 5.6 – 5.8 –
6.00 – 6.00.

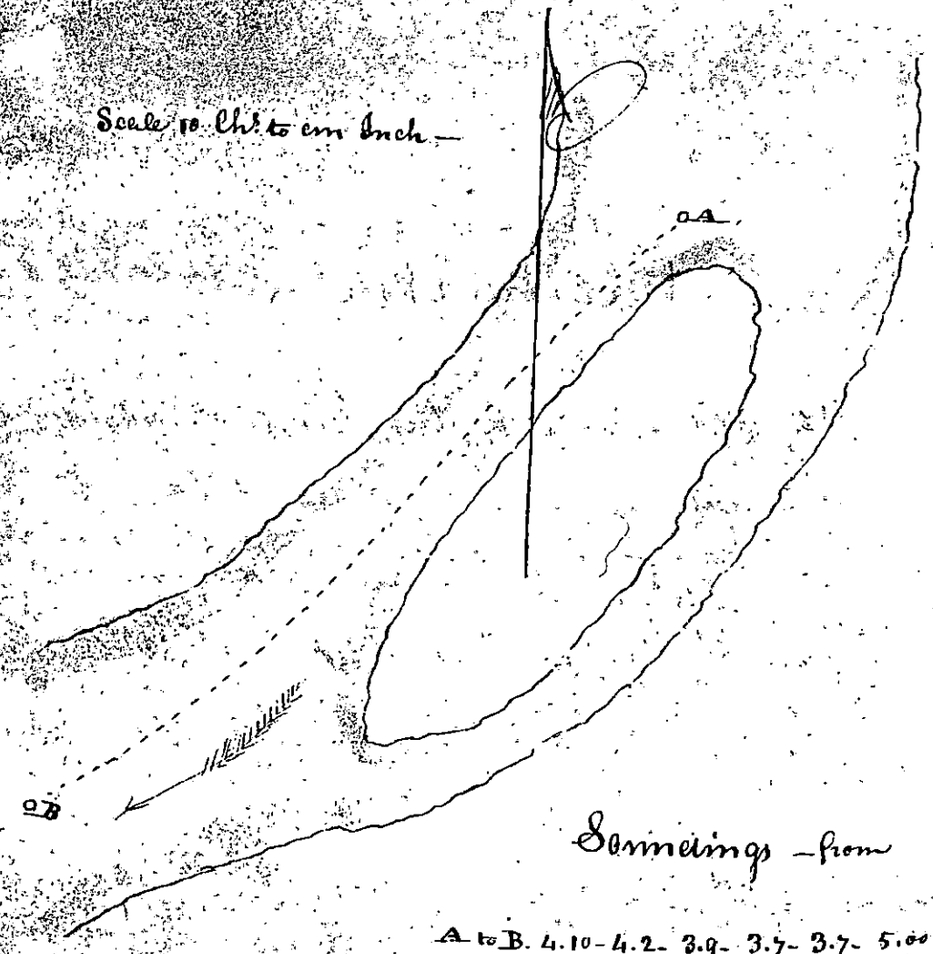
Fall 4 inches

Remarks.

This bar commences about 15 poles below the mouth of little Hockhocking. It is formed of a ledge rock, extending from bank to Bank.

Shoal No 57 — Newbury Bar —

Scale 10 Chs to an Inch —



Soundings — from

A to B. 4.10 - 4.2 - 3.9 - 3.7 - 3.7 - 5.00 - 5.3 -
4.7 - 4.3 - 4.1 - 4.00 - 6.00.

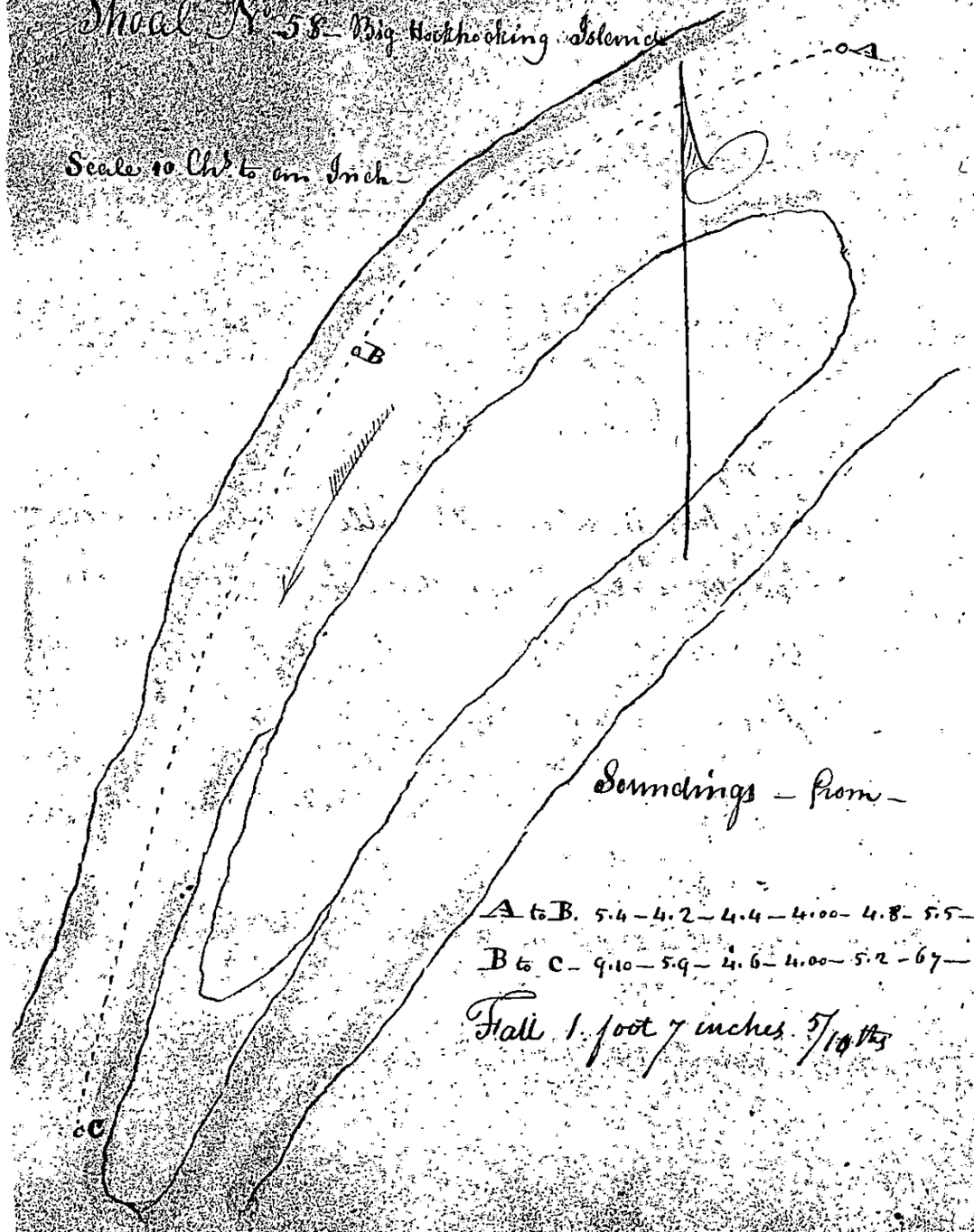
Fall 1 foot 5 inchs 9/10ths

Remarks

This bar is about 23 miles below Marietta.
The obstructions are shoal & the water on
this shoals swift the bar is formed of
sand and gravel.

Shoal No 58 – Big Hockhocking Islands

Scale 10 Ch^s to an Inch



Soundings – from –

A to B. 5.4 – 4.2 – 4.4 – 4.00 – 4.8 – 5.5 –

B to C – 9.10 – 5.9 – 4.6 – 4.00 – 5.2 – 6.7 –

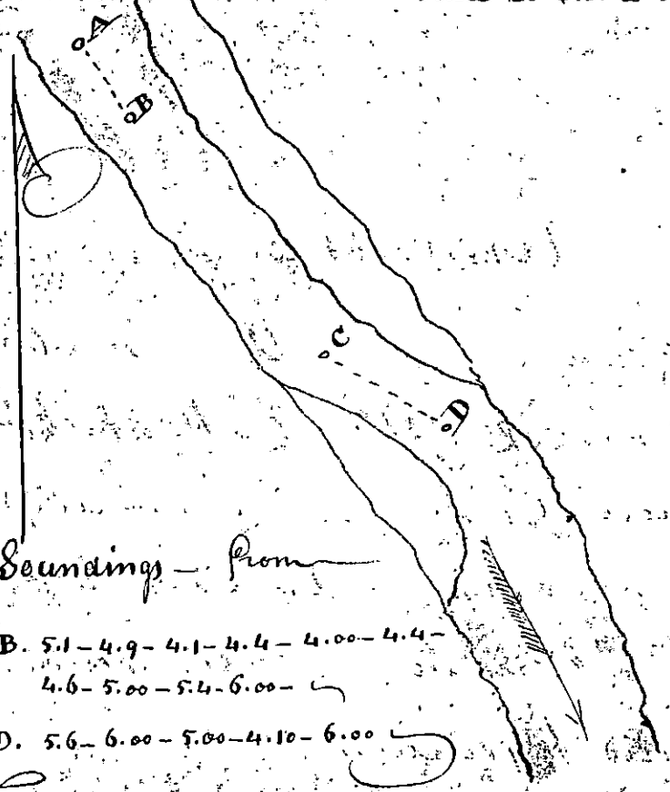
Fall 1 foot 7 inches 5/10 Ths

Remarks.

This Shoal is about 2 miles above the mouth of the Big Hockhocking River. There are a number of large rocks near the Channel the bars otherwise are composed of sand & gravel.

Sheet No. 59 – Lees Creek Bar.

Scale 20 Chs. to an Inch –



Soundings – from

A to B. 5.1 – 4.9 – 4.1 – 4.4 – 4.00 – 4.4 –
4.6 – 5.00 – 5.4 – 6.00 –

C to D. 5.6 – 6.00 – 5.00 – 4.10 – 6.00

Fall not surveyed being inconsiderable

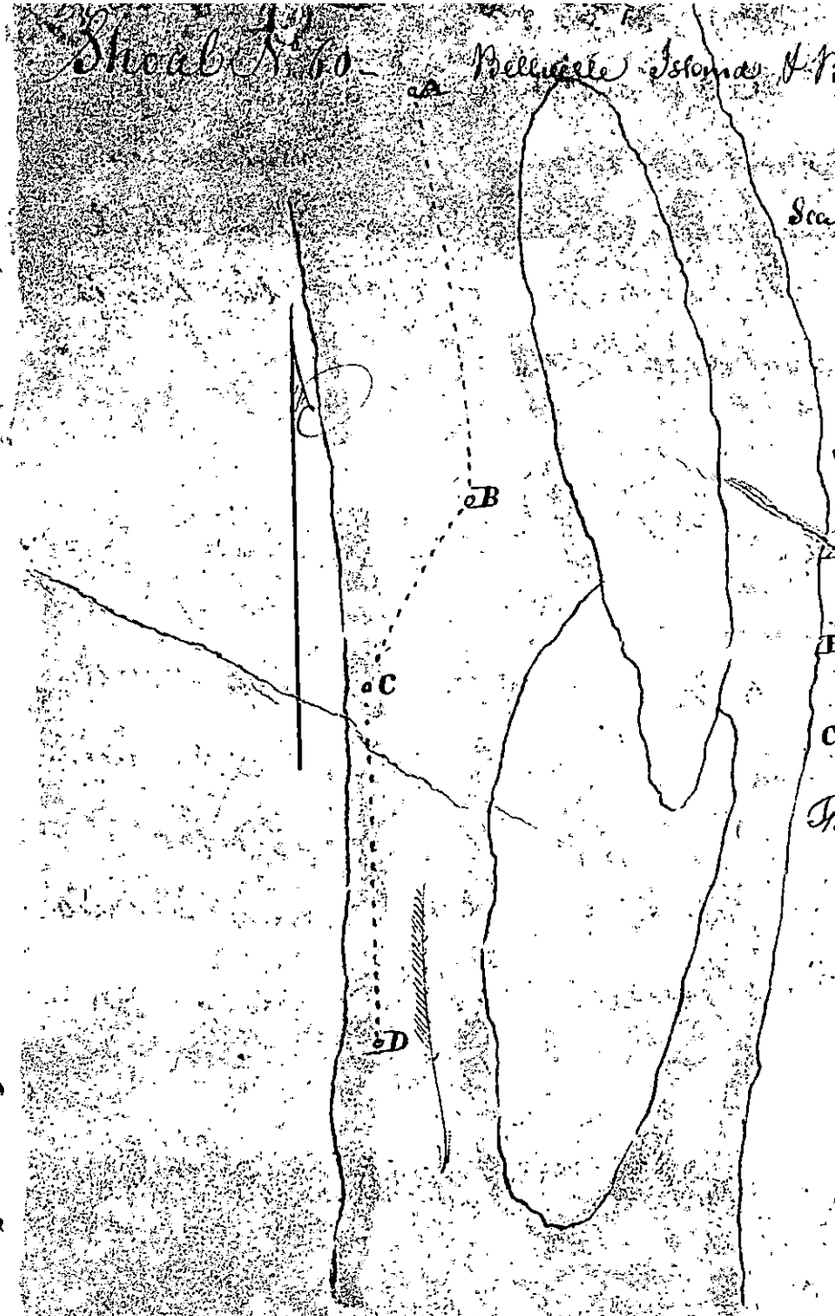
Remarks.

This is a short bar, extending across the river, about one mile above Belleville on which there is very little fall of water, the bar is formed of Gravel.

Remarks.

This Island and bars are about one mile below Belleville. The fall of water is considerable. The principal obstructions are at the head and foot of the Island. Those bars consist of Sand and Gravel only.

Sheet No. 10 — Belleville Island of Bar.



Scale 10 Chs to an Inch

Soundings - from

A to B. 5.00 - 5.9 - 4.7 -
4.10 - 5.0 -

B to C. 4.5. 4.2 - 4.4 -
4.6 - 4.8 - 6.00

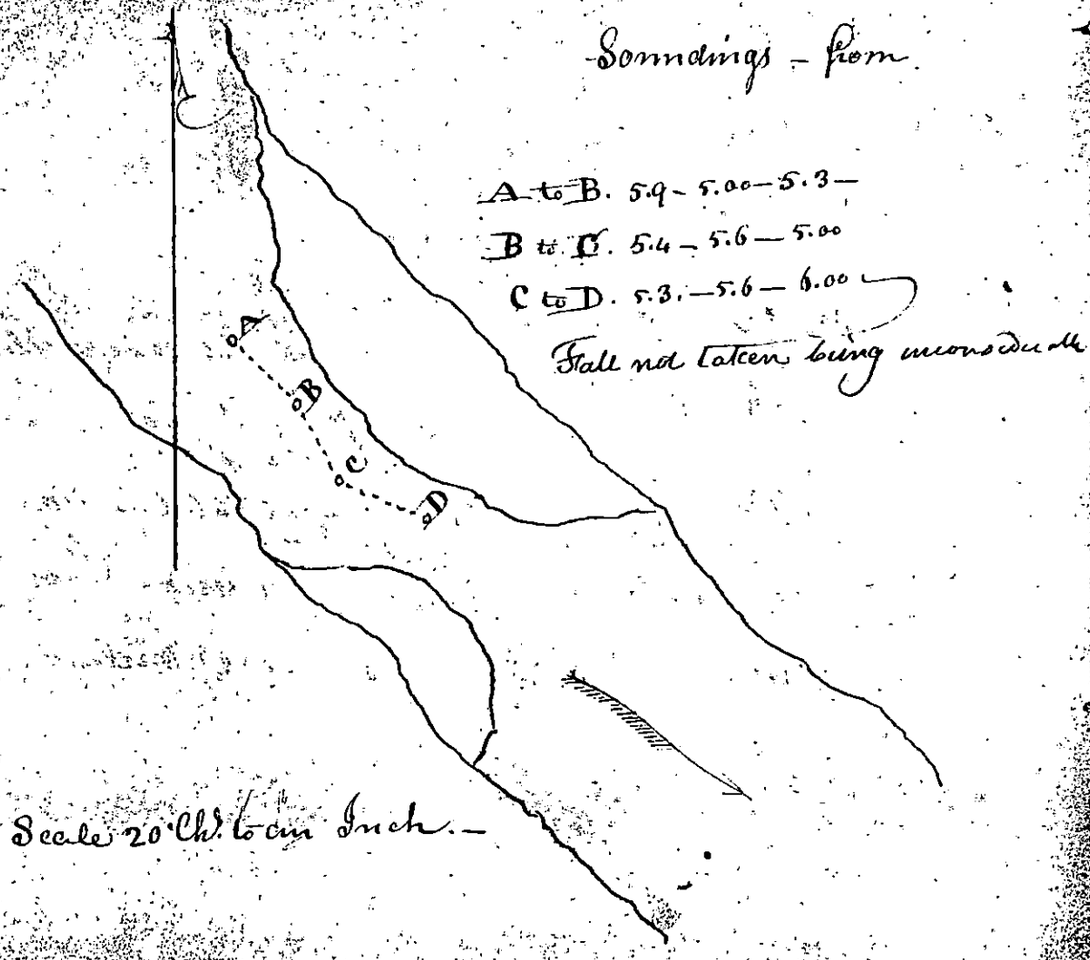
C to D. 5.9 - 5.4 - 4.00 -
3.00 - 4.5 - 5.11 -

Fall 2 feet 8 inches

Remarks.

This Island and bars are about one mile below Belleville - The face of water is considerable. The principal obstructions are at the head of the Island. Those consist of Sand and Gravel only

Shoal No 61 Strode River Bar



Soundings from

A to B. 5.9 - 5.00 - 5.3 -

B to C. 5.4 - 5.6 - 5.00

C to D. 5.3. - 5.6 - 6.00

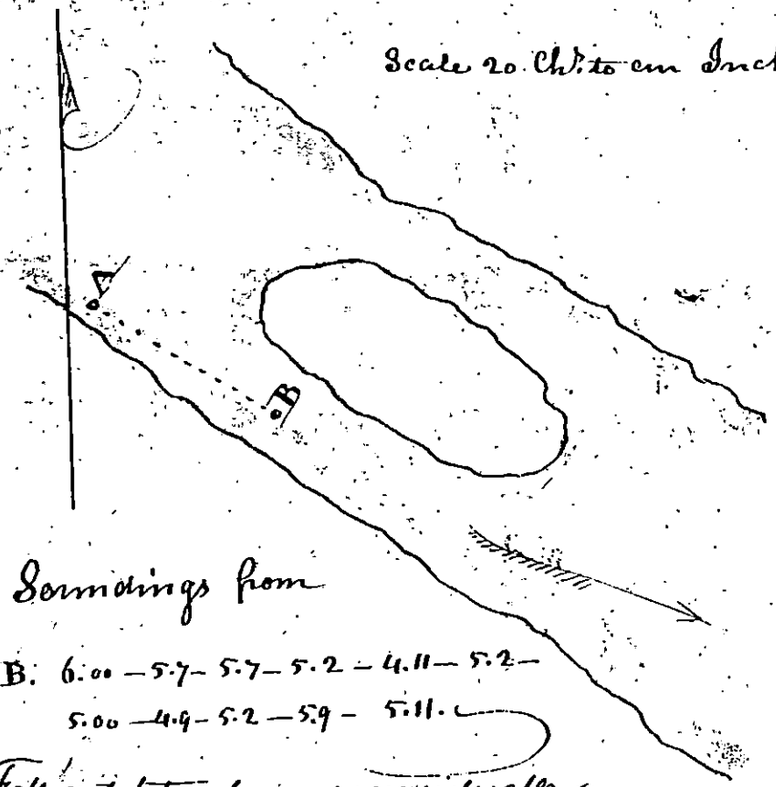
Tide not taken being unnecessary

Scale 20 Ch. to an Inch.

Remarks.

This Shoal can scarcely be considered an obstruction. The water is not very rapid over it, and the bottom of the Channel is a smooth gravel Bar.

Shoal № 62 Bar two miles below Amberson's or Buffington's Island. —



Scale 20 Ch.s to an Inch —

Soundings from

A to B. 6.00 — 5.7 — 5.7 — 5.2 — 4.11 — 5.2 —
5.00 — 4.9 — 5.2 — 5.9 — 5.11.

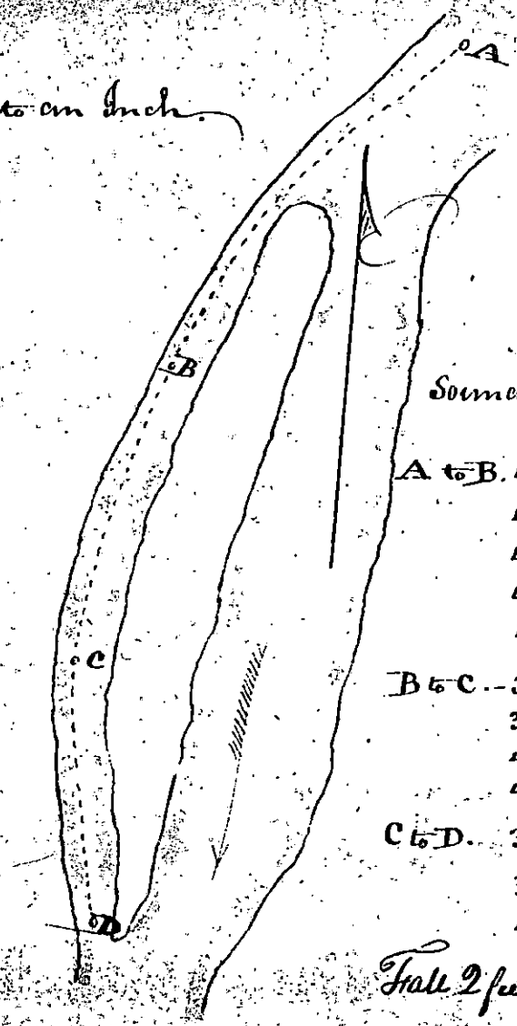
Fall not taken being inconsiderable

Remarks

This Shoal like the last, can scarcely be named among the obstructions. The Bar is formed of Gravel, and the water fall is not rapid over it.

Shoal No 63 — Amherst Island.

Scale 20 Chs. to an Inch.



Soundings — from

A to B. 4.3 — 3.2 — 4.00 —
4.00 — 4.4 — 4.6 —
4.11 — 4.4 — 4.2 —
4.6 — 4.4 — 4.2 —
4.1 — 3.9 —

B to C. — 3.3 — 3.00 — 3.1 — 3.6 —
3.8 — 4.3 — 4.4 — 3.7 —
4.6 — 4.6 — 4.8 — 4.4 —
4.7 — 6.00 — 4.6 — ——

C to D. 3.11 — 3.9 — 4.1 — 3.8 — 3.7 —
3.5 — 3.4 — 3.1 — 3.00 — 3.3 —
4.00 — 4.9 — 8.00

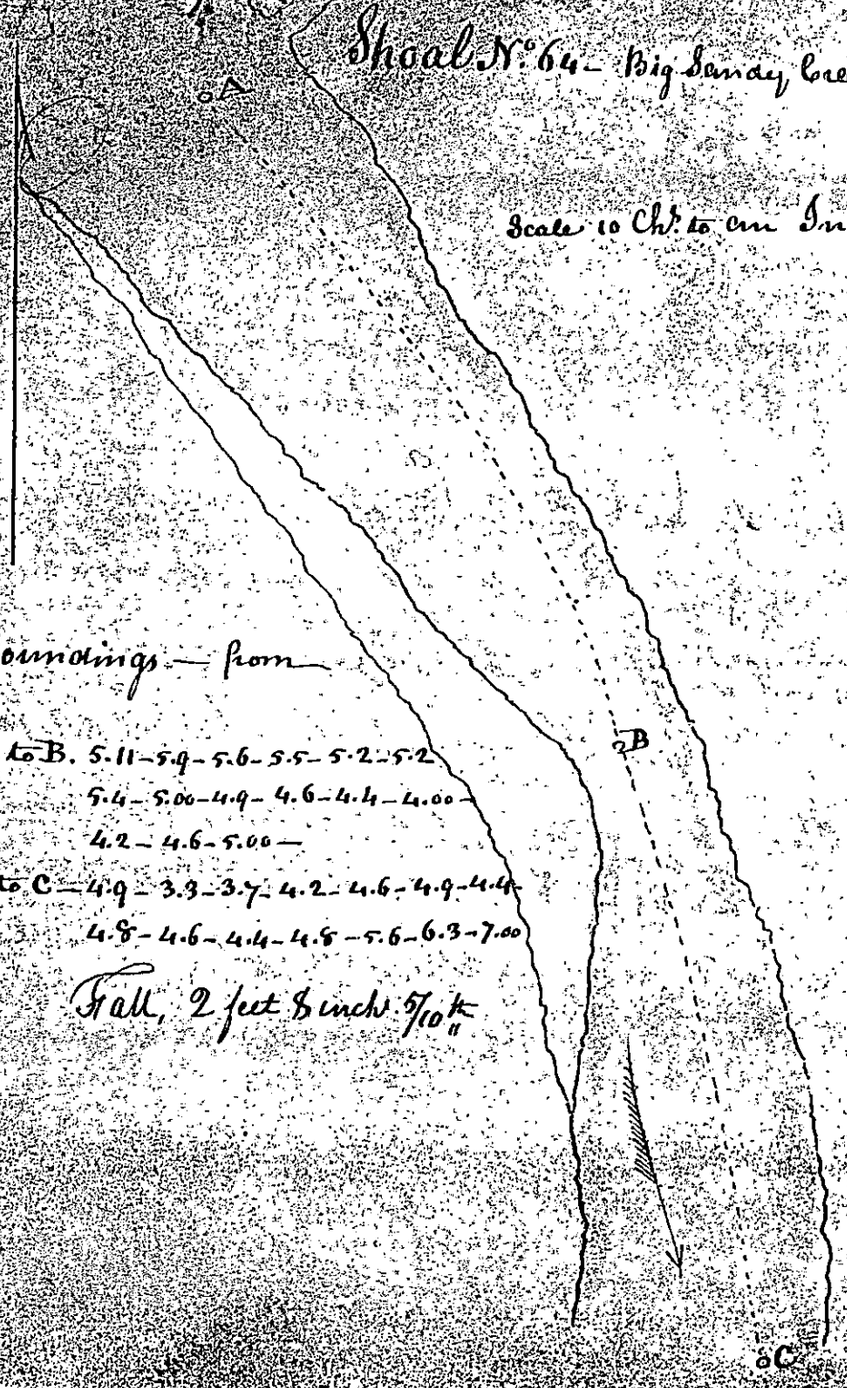
Scale 2 feet 10 inches

Remarks. —

This Shoal may be considered among the most weighty obstructions in the river. The Survey was made on the right or Ohio side of the Island, being the Channel used in very low water. This Channel is however rendered difficult & dangerous by the

Shoal N°64 – Big Sandy Creek Bar –

Scale 10 Ch.s to an Inch –



Soundings – from –

A to B. 5.11 – 5.9 – 5.6 – 5.5 – 5.2 – 5.2
5.4 – 5.00 – 4.9 – 4.6 – 4.4 – 4.00 –
4.2 – 4.6 – 5.00 –

B to C – 4.9 – 3.3 – 3.7 – 4.2 – 4.6 – 4.9 – 4.4 –
4.8 – 4.6 – 4.4 – 4.8 – 5.6 – 6.3 – 7.00

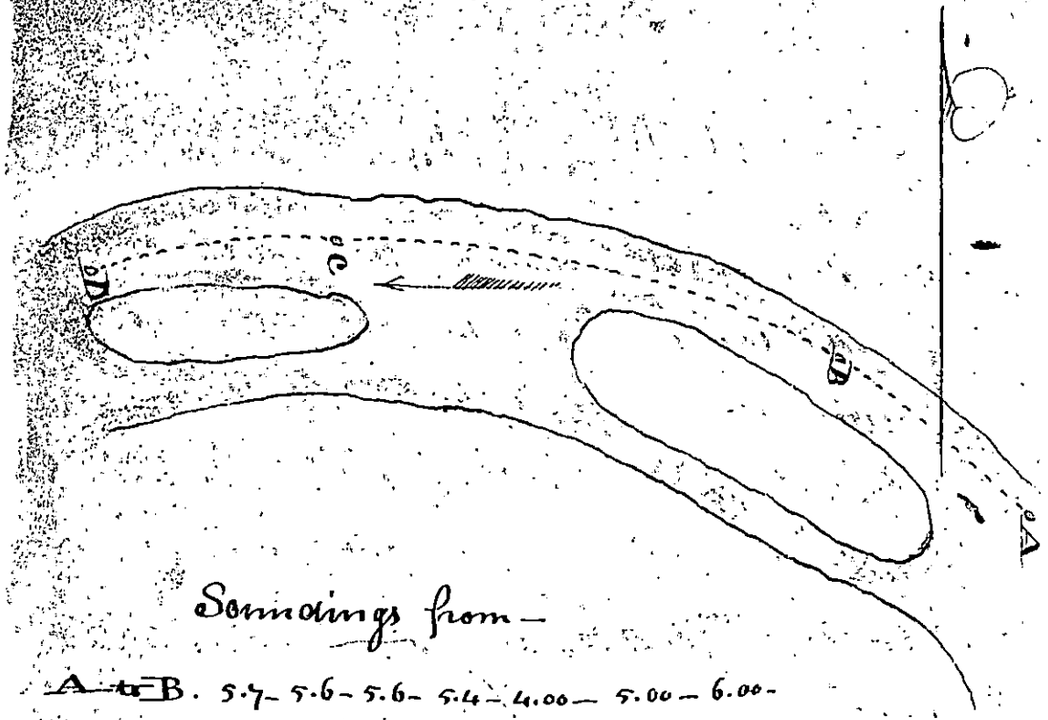
Fall, 2 feet 8 inch. 7/10ths

Remarks. –

This Shoal commences at the mouth of Big Sandy Creek – about 4 miles below Evansville Island. – It has an even gravelly Bottom, over which the water runs with much rapidity. The Channel could be sufficiently opened, at a small expense. –

Shoal No 6 — Old Town Bar —

Scale 20 Chs to an Inch —



Soundings from —

A to B. 5.7 – 5.6 – 5.6 – 5.4 – 4.00 – 5.00 – 6.00 –

B to C – no soundings –

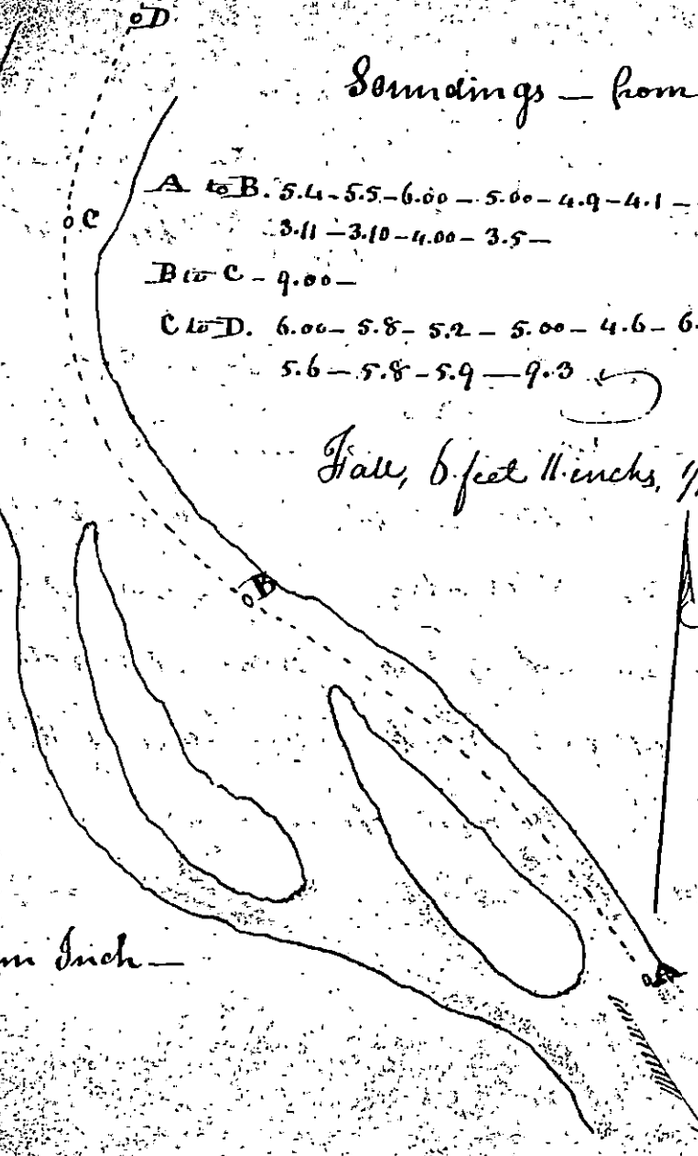
C to D. – 5.9 – 5.00 – 5.4 – 4.2 – 3.9 – 3.5 – 3.5 – 3.6 – 3.5 – 3.7 – 5.00 – 5.6 –
5.6 – 5.6 – 5.4 – 5.4 – 5.4 – 5.7 – 5.9 –

Fall 11 inches

Remarks

The bars at the mouth of Old Town Creek, are formed of Sand & gravel. The water is not rapid over them and the part of the Channel that would require to be improved, is of no considerable length.

Shoal № 67 — Letart Falls —



Soundings — from

A to B. 5.4 – 5.5 – 6.00 – 5.00 – 4.9 – 4.1 – 4.00 – 4.00 – 3.11 – 3.10 – 4.00 – 3.5 –

B to C – 9.00 –

C to D. 6.00 – 5.8 – 5.2 – 5.00 – 4.6 – 6.3 – 5.2 – 5.6 – 5.8 – 5.9 – 9.3

Fall, 6 feet 11 inches, 1/10 ft

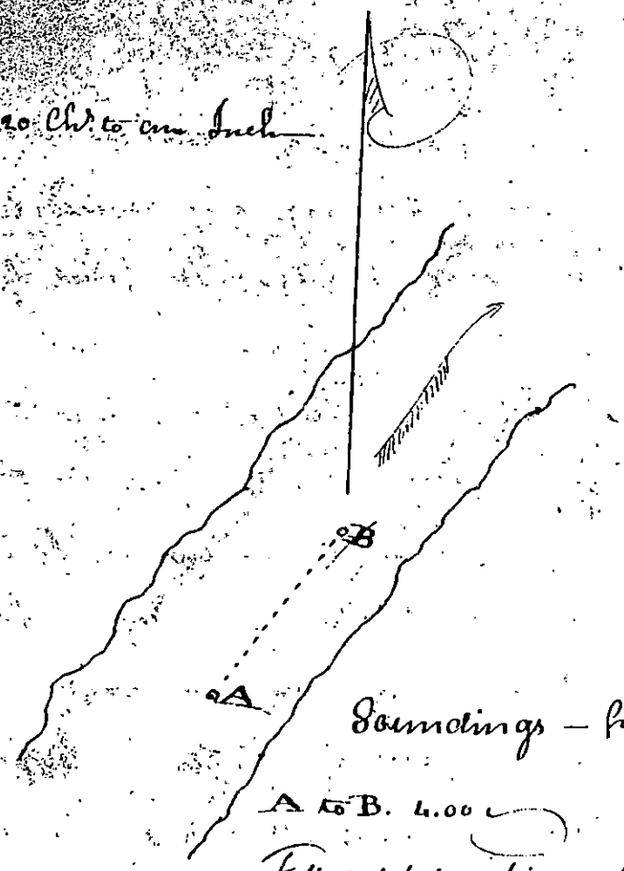
Scale 20 Ch.s to an Inch —

Remarks

This Shoal has generally been considered the most difficult & dangerous among the Shoals above the Great Falls. The part of this Shoal which is distinguished by the name of Le Lent Falls, is a little above C. in the Plat, at which place the water glides over a smooth rock for about ten Perches in which distance the water falls 4 feet 1½ inches, and on no part of this Channel is there less than 4 feet water. The bars formed at the heads and foot of the Islands are gravel and sand.

Shoal No 68. Bar two miles below Lewis's Falls.—

Scale 20 Ch.s to an Inch.



Soundings — from

A to B. 4.00

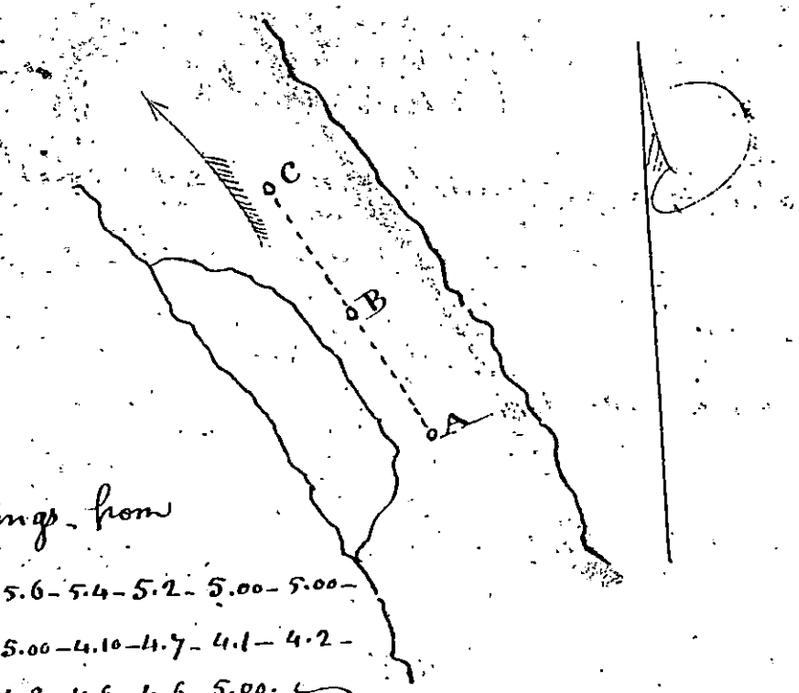
Fall not taken being inconsiderable

Remarks.

This bar is about ~~two~~ miles below Lewis falls
It is an obstruction easily removed — It is a
very gentle rapid over a short bend over
gravel bar

Shoal N°. 69 – Decrease's Bar & Ripple –

Scale 20 Ch.s to an Inch –



Soundings from

A to B. 5.6 – 5.4 – 5.2 – 5.00 – 5.00 –

B to C – 5.00 – 4.10 – 4.7 – 4.1 – 4.2 –

4.3 – 4.6 – 4.6 – 5.00.

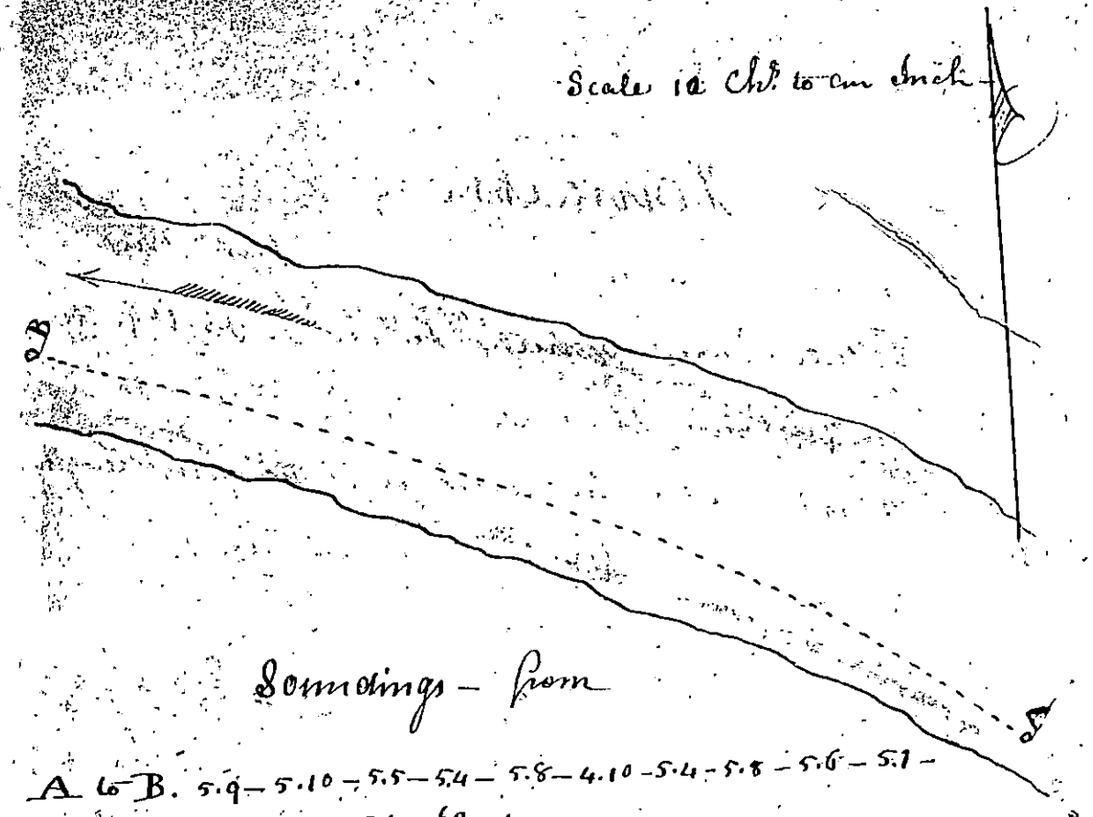
Shall not latter being inconsiderable

Remarks.

This is also a Sand and Gravel bar, and is situated about 8 miles below Le Sault Falls. The distance that the Channel would require to be improved is of no great length.

Shoal No. 70 Sliding Hill Bar

Scale 10 Ch.s to an Inch



Soundings – from

A to B. 5.9 – 5.10 – 5.5 – 5.4 – 5.8 – 4.10 – 5.4 – 5.8 – 5.6 – 5.1 –
5.00 – 5.2 – 5.4 – 6.3 –

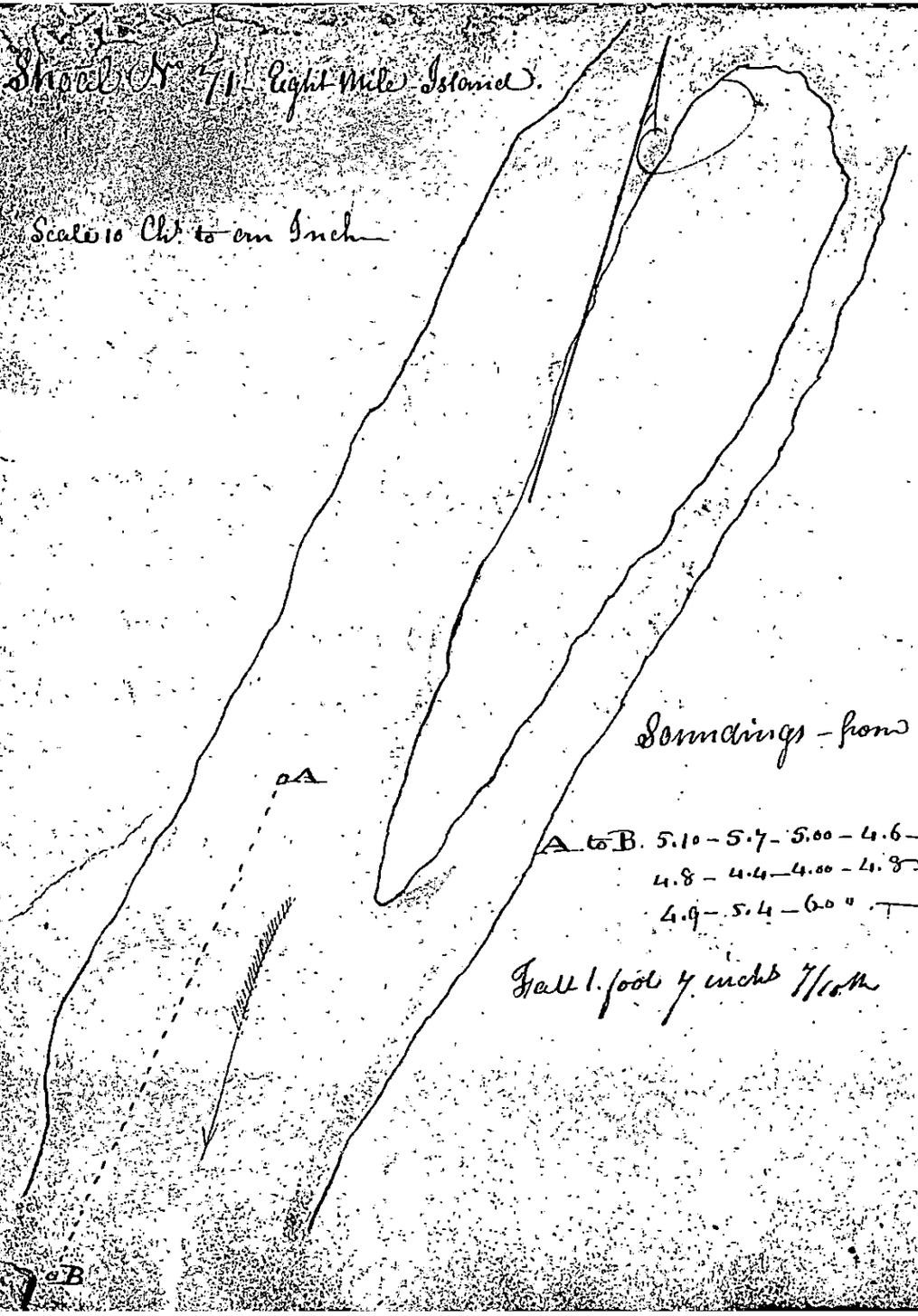
Fall 2 feet 9 inches

Remarks.

There is so much water on this bar, that it can scarcely be considered an obstruction; a trifling sum of money would open the Channel to six feet, as the bar is of gravel.

Shoal No 71 - Eight Mile Island.

Scale 10 Ch. to an Inch



Soundings - from

A to B. 5.10 - 5.7 - 5.00 - 4.6 -
4.8 - 4.4 - 4.00 - 4.8 -
4.9 - 5.4 - 6.0 "

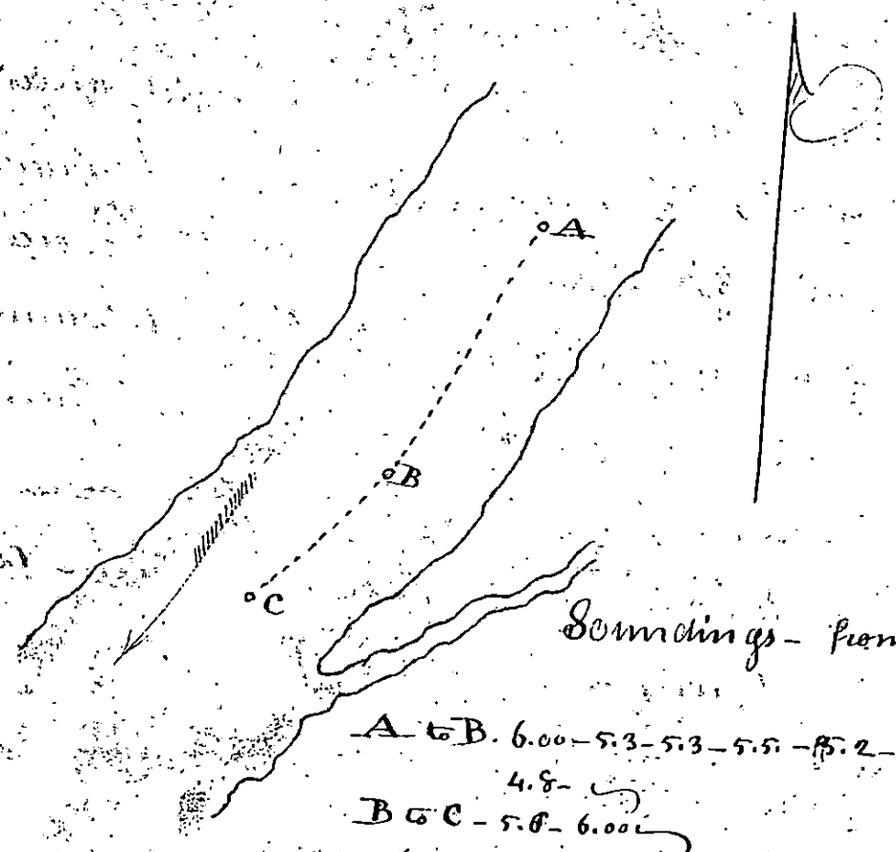
Fall 1. foot 7 inches 7/10th

Remarks.—

This Island and shoal is eight miles above the mouth of the Great Kanawha the bar is formed of sand and gravel and admits of a deep & safe Channel with no considerable expence — There are some few logs on this bar, near the head of the Island & one near the Channel at the foot

Shoal No 72 — Six mile Island —

Scale 10 Ch.s to an Inch.



Soundings — from —

A to B. 6.00 — 5.3 — 5.3 — 5.5 — 5.2 — 5.00 — 4.8 —

B to C — 5.8 — 6.00

Shall not taken, being inconsiderable

Remarks.

This Island is five miles above the Great Kanawha river — & lies so near the Virginia Shore, that it can scarcely be distinguished as an Island — There are four feet 8 inches water on the bar — The current is gentle & the bottom Gravel.

Shoal N° 73 Below Big Kanawha -

Scale 10 Chs to an Inch.

Soundings - from

A to B. 6.00 - 5.5 - 5.4 - 5.00 - 5.10 - 5.3 - 5.8
6.1 - 6.00 - 6.4 - 6.00 - 5.2 - 5.00 -

B to C - 5.1 - 5.0 - 5.9

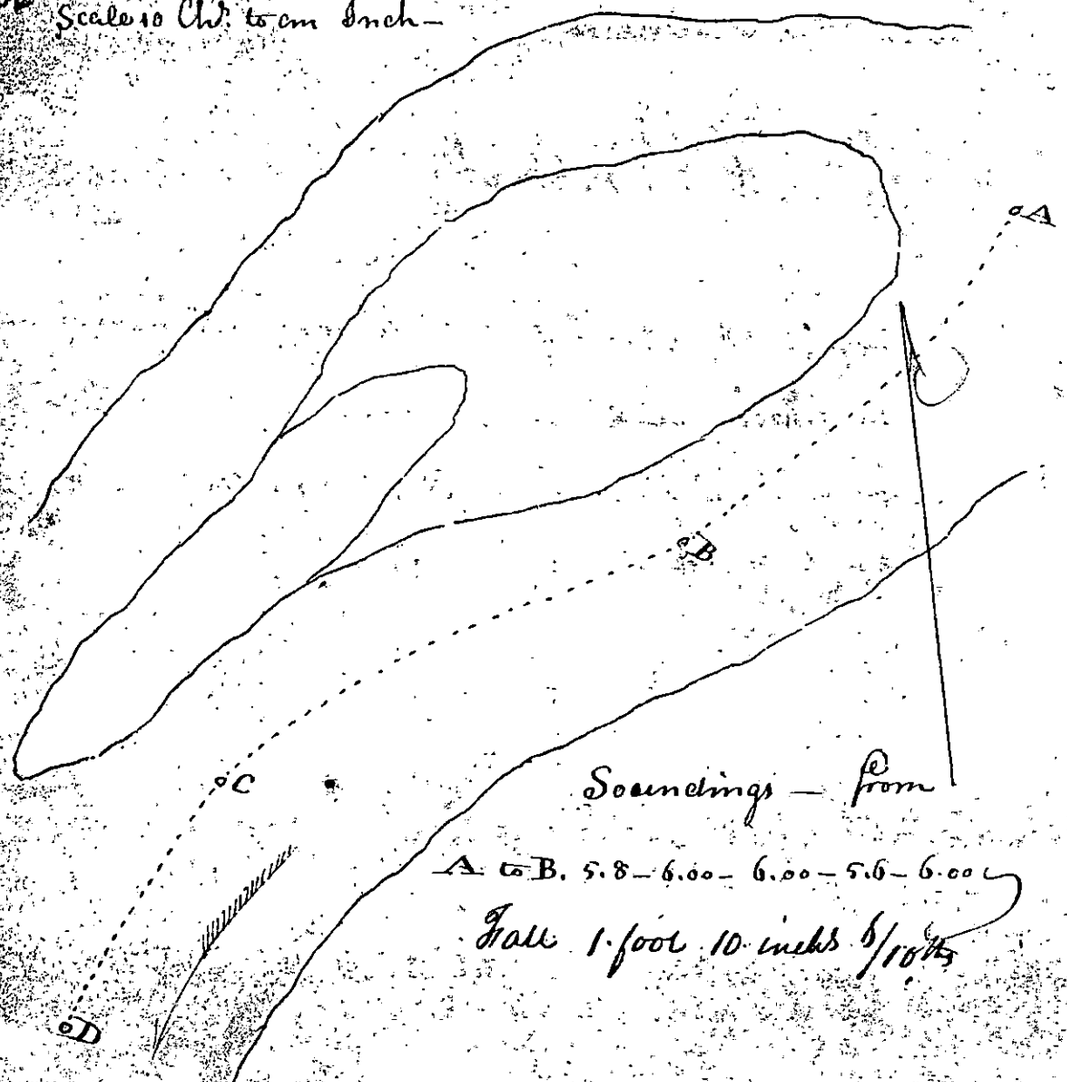
Fall not taken being inconsiderable

Remarks.

This Shoal is half a mile below the mouth of the Great Kanawha. The current bears which is formed of Gravel, on which there is five feet water.

Shoal No. 74 — Gallipolis Island —

Scale 10 Ch.s to an Inch —



Soundings — from

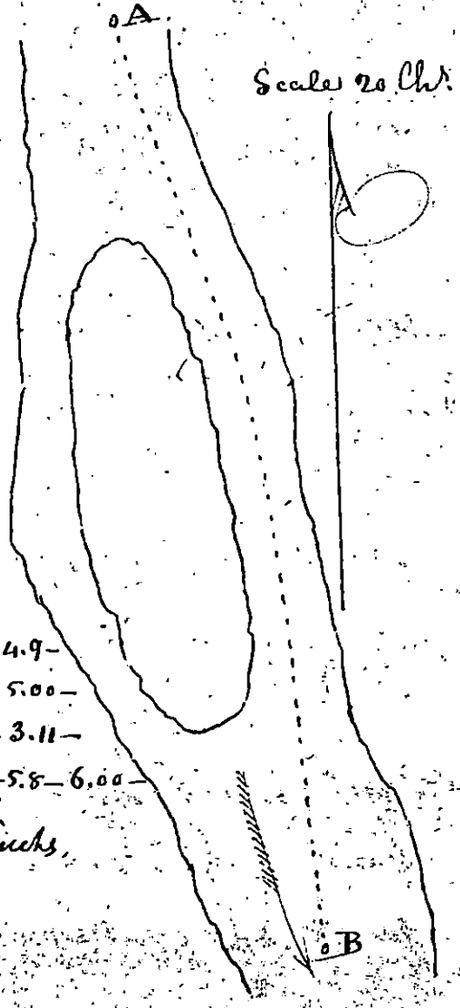
A to B. 5.8 — 6.00 — 6.00 — 5.6 — 6.00

Fall 1 foot 10 inchs 6/10ths

Remarks.

This Island is one mile above Gallipolis. The bars are very short on which there are but two fathoms in the six feet — The bars are formed of gravel.

Shoal № 75 — Racoon Island —



Scale 20 Chs. to an Inch

Soundings - from

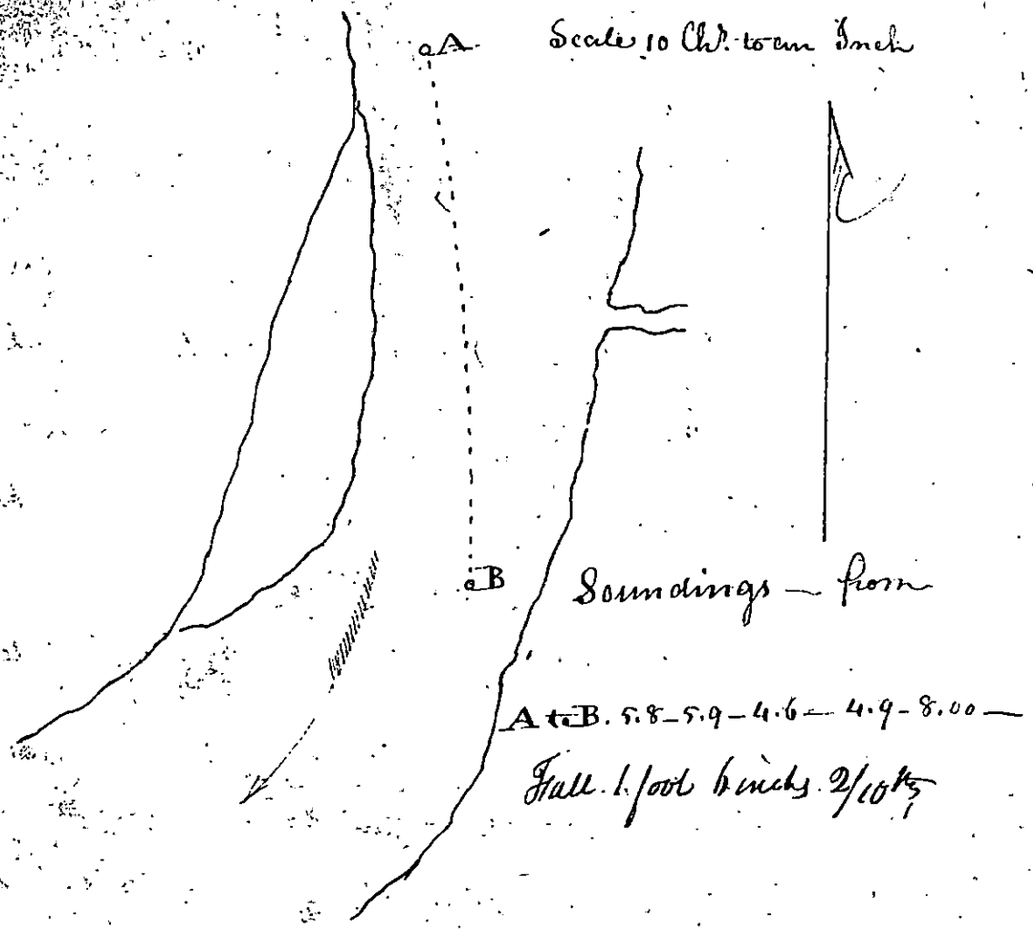
A to B. 5.00 - 5.00 - 4.3 - 4.9 -
4.5 - 4.1 - 5.11 - 5.00 -
5.8 - 4.6 - 4.2 - 3.11 -
4.10 - 4.6 - 5.00 - 5.8 - 6.00 -

Fall 1 foot 11 inches.

Remarks. —

This Shoal is about seven miles below Gallipolis and a little above the mouth of Racoon Creek and is occasioned by a Willow Bar lying near the ~~Ohio~~ ~~shore~~ Shore is there are a number of logs in and near the Channel & on a Bar below the foot of the Island which make a dangerous passage in low water — The Bar consists of Gravel & rocks which can be easily removed.

Shoal No. 76 — Sixteen Mile Creek Bar.



Soundings — from

A to B. 5.8 — 5.9 — 4.6 — 4.9 — 8.00 —

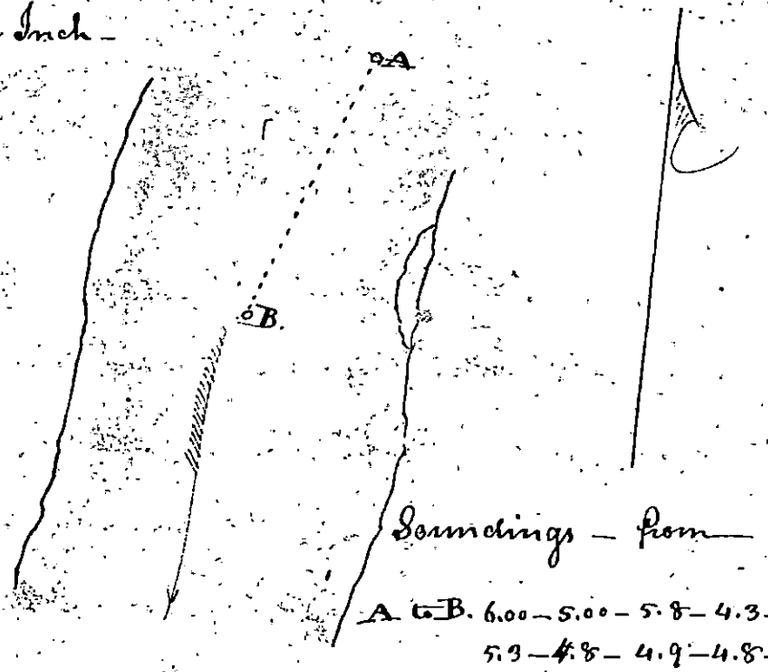
Shall 1 foot 6 inches 2/10ths

Remarks.

This is a Shoal of a Gravel bottom below the mouth of Swan Creek and about 3 Miles above the mouth of little Sugar-=andotte river bends round Green bot-=tom although it has a deep Channel there are some rocks in it that should be removed.

Shoal № 77 — Green Bottom or Shoal Creek

Scale 10 Ch. to an Inch —



Soundings — from —

A to B. 6.00 — 5.00 — 5.8 — 4.3 —
5.3 — 4.8 — 4.9 — 4.8 —
5.6

Fall. 1. foot. 0.4 5/10ths

Remarks

This bar like the last is of Gravel, the Channel pretty deep & safe, no log or rocks in it only but a short distance over the bar

Shoal N° 78. Cuyamaca

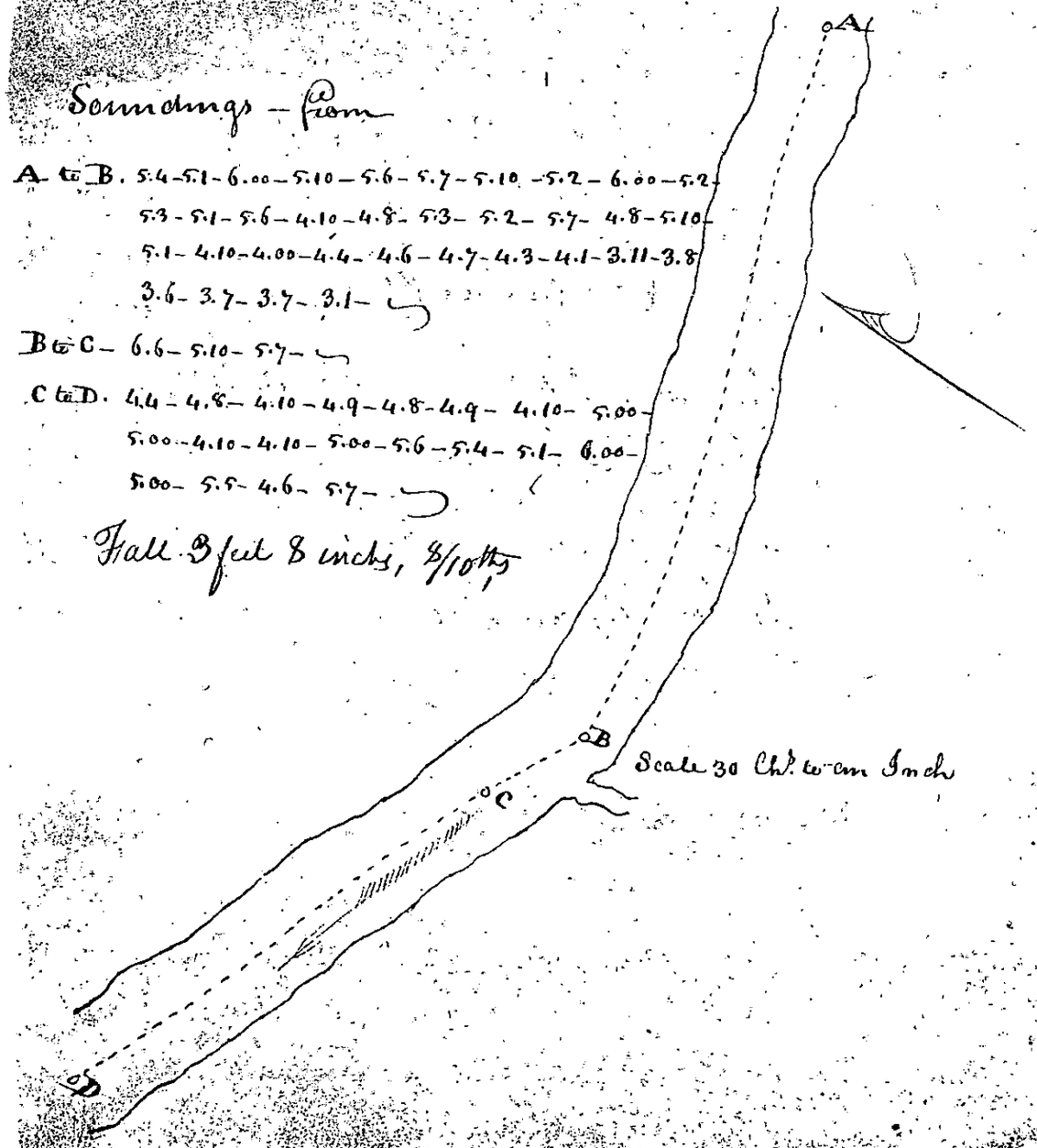
Soundings — from

A to B. 5.4-5.1-6.00-5.10-5.6-5.7-5.10-5.2-6.00-5.2-
5.3-5.1-5.6-4.10-4.8-5.3-5.2-5.7-4.8-5.10-
5.1-4.10-4.00-4.4-4.6-4.7-4.3-4.1-3.11-3.8
3.6-3.7-3.7-3.1-

B to C- 6.6-5.10-5.7-

C to D. 4.4-4.8-4.10-4.9-4.8-4.9-4.10-5.00-
5.00-4.10-4.10-5.00-5.6-5.4-5.1-6.00-
5.00-5.5-4.6-5.7-

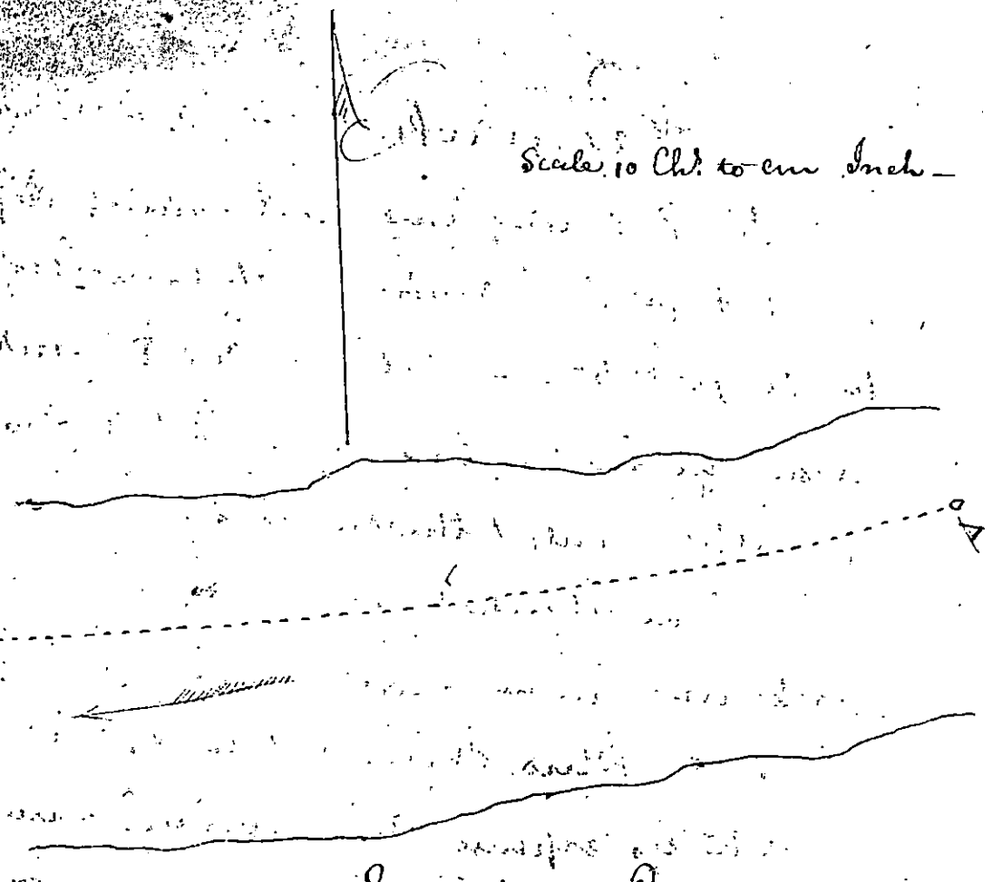
Fall 3 feet 8 inches, 8/10ths



Remarks.

This Shoal is long and the Channel difficult to follow — owing to its being crossed by several bars — Between A & B. and near the latter, there is a rock bottom the other parts of the bar is formed of Gravel, on which there are some small rocks, and many trees & snags — A Channel near the Ohio Shore, is also opened with little expense than the one between The latter is now principally used —

Shoal No. 79 — Mouth of Twelve Pole —



Soundings — from —

A to B. 5.10 – 5.9 – 5.5 – 5.6 – 5.2 – 4.9 – 4.5 – 3.8 – 3.4 – 3.9 – 4.4 – 4.00 – 4.10 – 6.00

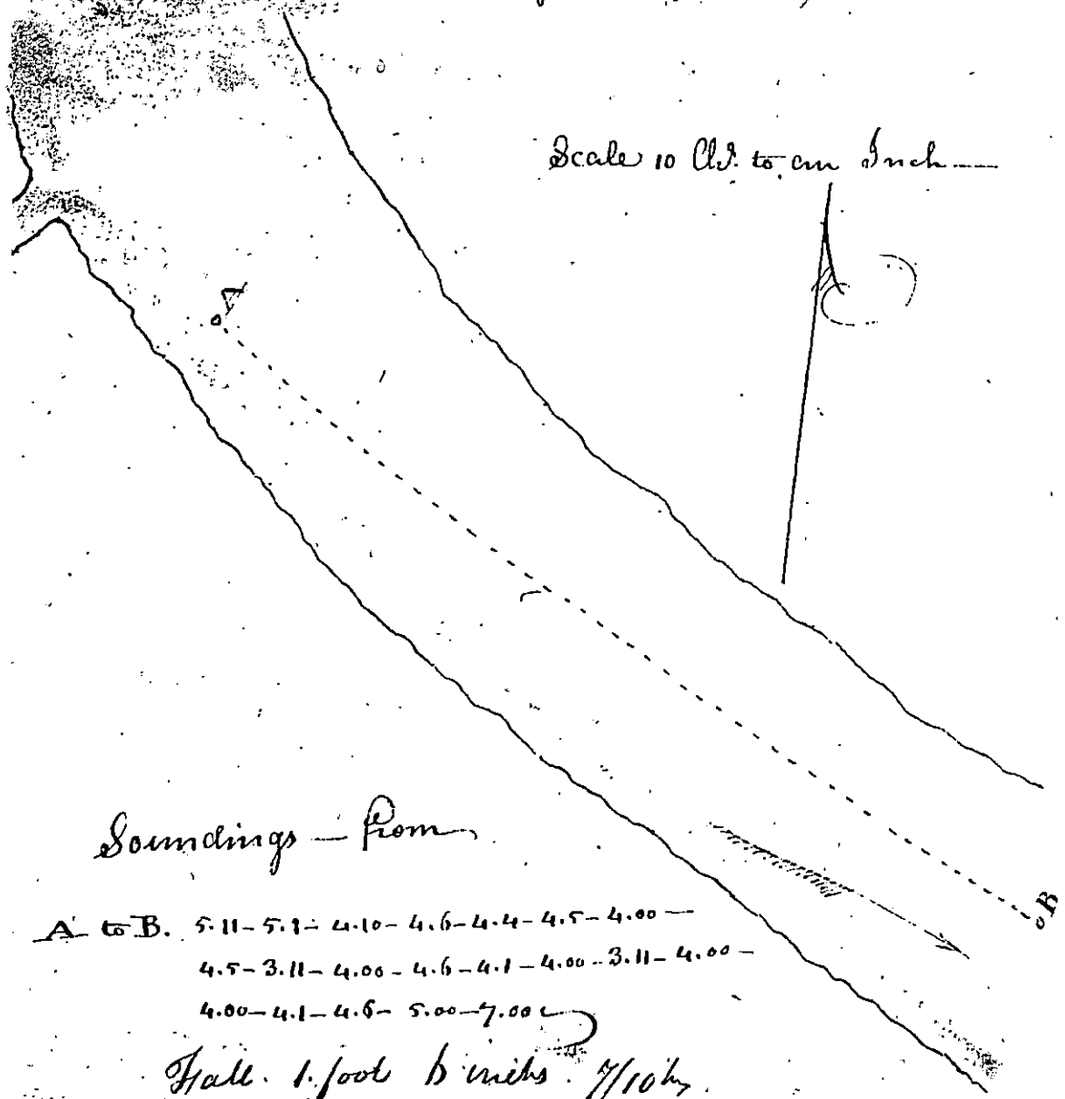
Hall. 5 inches 2/10ths

Remarks

This Shoal commences 200 yards below the mouth of Twelve Pole Creek, it has a smooth gravel bottom, and forms no other obstruction than what arises from a want of sufficient depth of water over the bar.

Shoal N° 80 — Big Sunday Bar

Scale 10 Ch. to an Inch



Soundings — from

A to B. 5.11 – 5.1 – 4.10 – 4.6 – 4.4 – 4.5 – 4.00 —
4.5 – 3.11 – 4.00 – 4.6 – 4.1 – 4.00 – 3.11 – 4.00 –
4.00 – 4.1 – 4.6 – 5.00 – 7.00

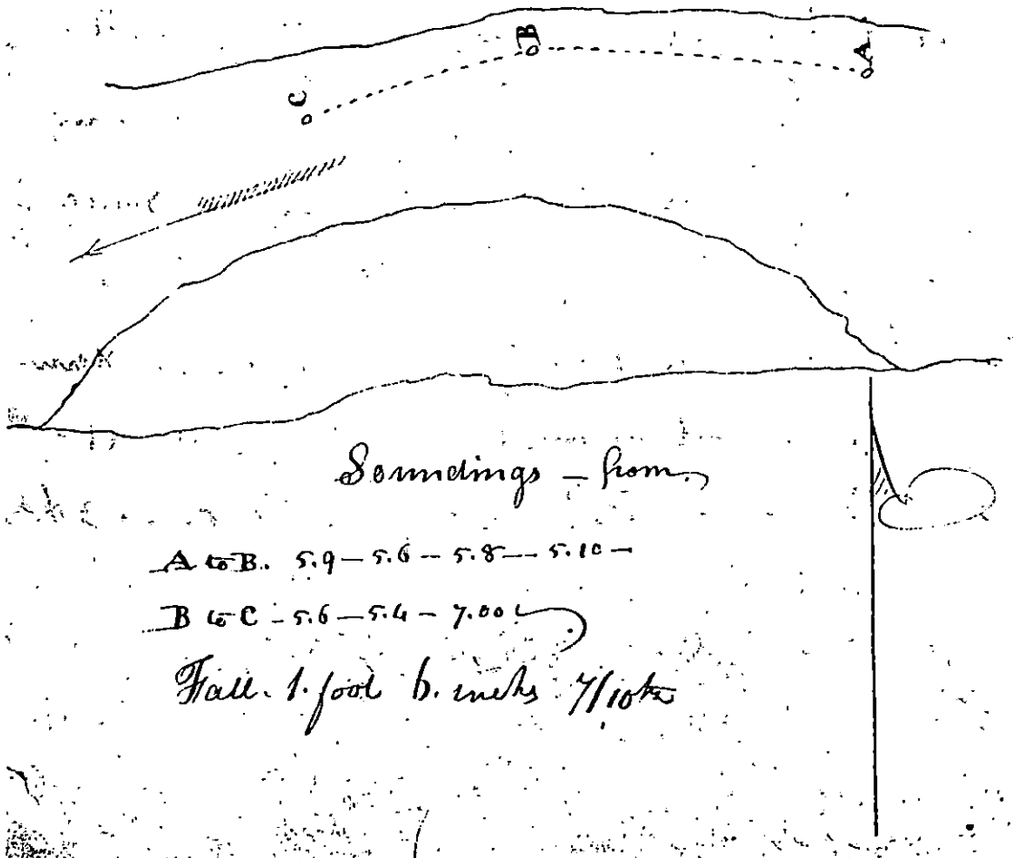
Fall 1 foot 6 inches 7/10ths

Remarks.

This Shoal commences about one mile above the mouth of Big Sunday river its bottom appears generally to consist of small gravel, but it has in some==ce of small rocks lying in various parts of the Channel & some of them so large as to make the passage dan=gerous — ~~the boat~~ while the boat is conducted with great care & Skill

Shoal No. 81 — Ferguson's Bar

Scale 10 Chs to an Inch —



Soundings — from

A to B. 5.9 — 5.6 — 5.8 — 5.10 —

B to C — 5.6 — 5.4 — 7.00

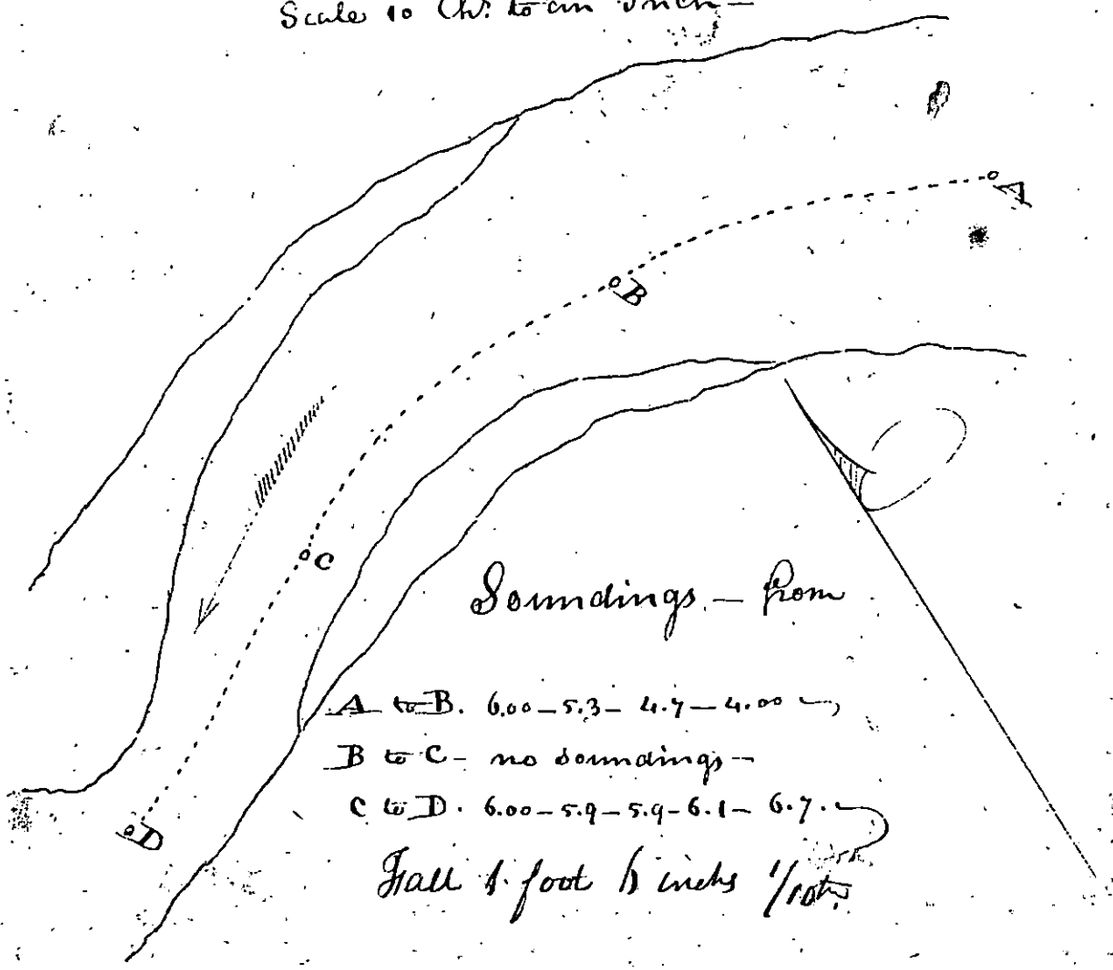
Fall 1 foot 6 inches 7/10ths

Remarks.

This Shoal can scarcely be considered an obstruction, it lies on the Kentucky side of the river, and extends to the middle of the Ohio. It is about half a mile below the hanging rock and four miles above the mouth of Little Sandy — It has a smooth gravel bottom.

Shoal No. 82 — Little Scioto Shoals —

Scale 10 Chs. to an Inch —



Soundings — from

A to B. 6.00 — 5.3 — 4.7 — 4.00

B to C — no soundings —

C to D. 6.00 — 5.9 — 5.9 — 6.1 — 6.7.

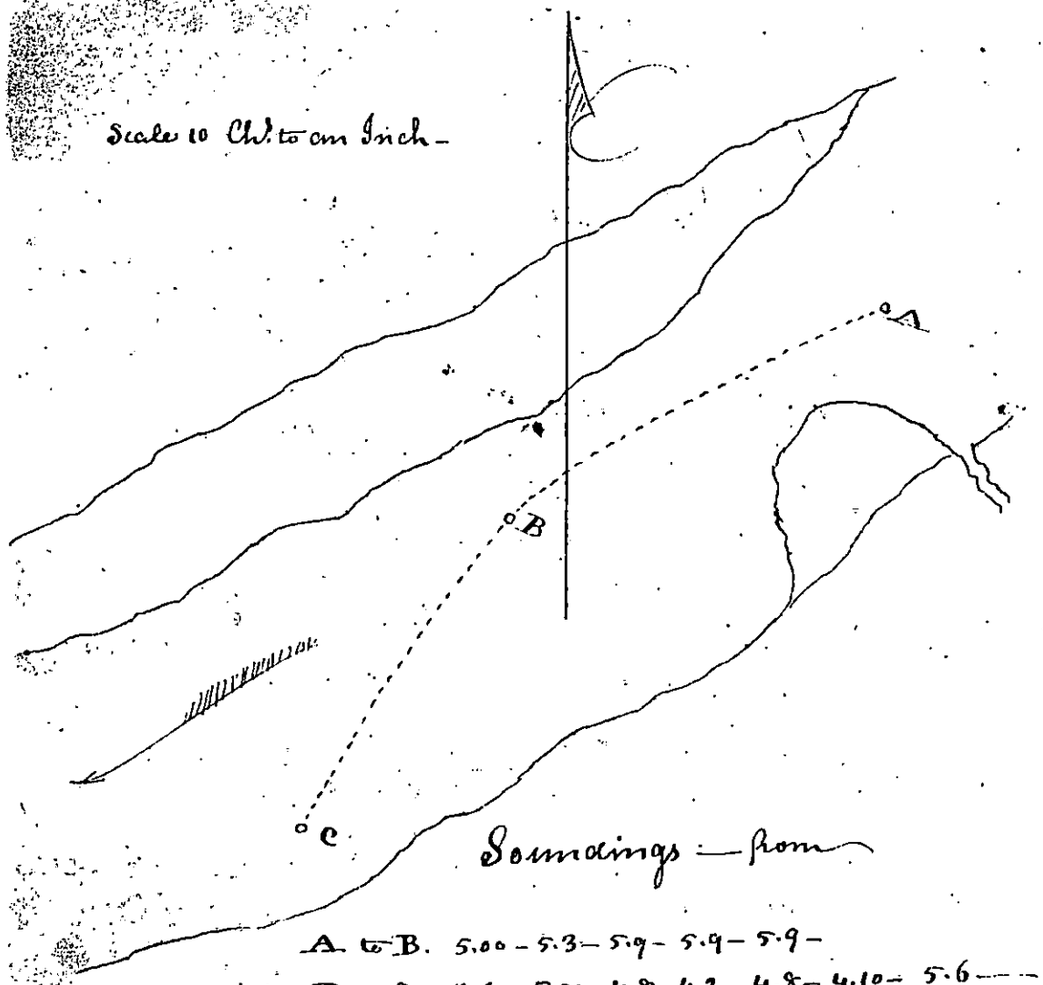
Fall 1 foot 6 inches 1/10ths

Remarks.

This Shoal commences a little below the mouth of little Scioto, and in full view of it — A large rock extending far into the River from the Ohio Shore; and a Sand bar on the Kentucky Shore, nearly opposite, so confine the waters to make a pretty good and safe Channel; not obstructed with rocks or logs.

Shoal No. 83 – Little Brush Creek Bar

Scale 10 Ch. to an Inch –



Soundings — from

A to B. 5.00 – 5.3 – 5.9 – 5.9 – 5.9 –

B to C – 6.6 – 5.00 – 4.8 – 4.2 – 4.8 – 4.10 – 5.6 ——

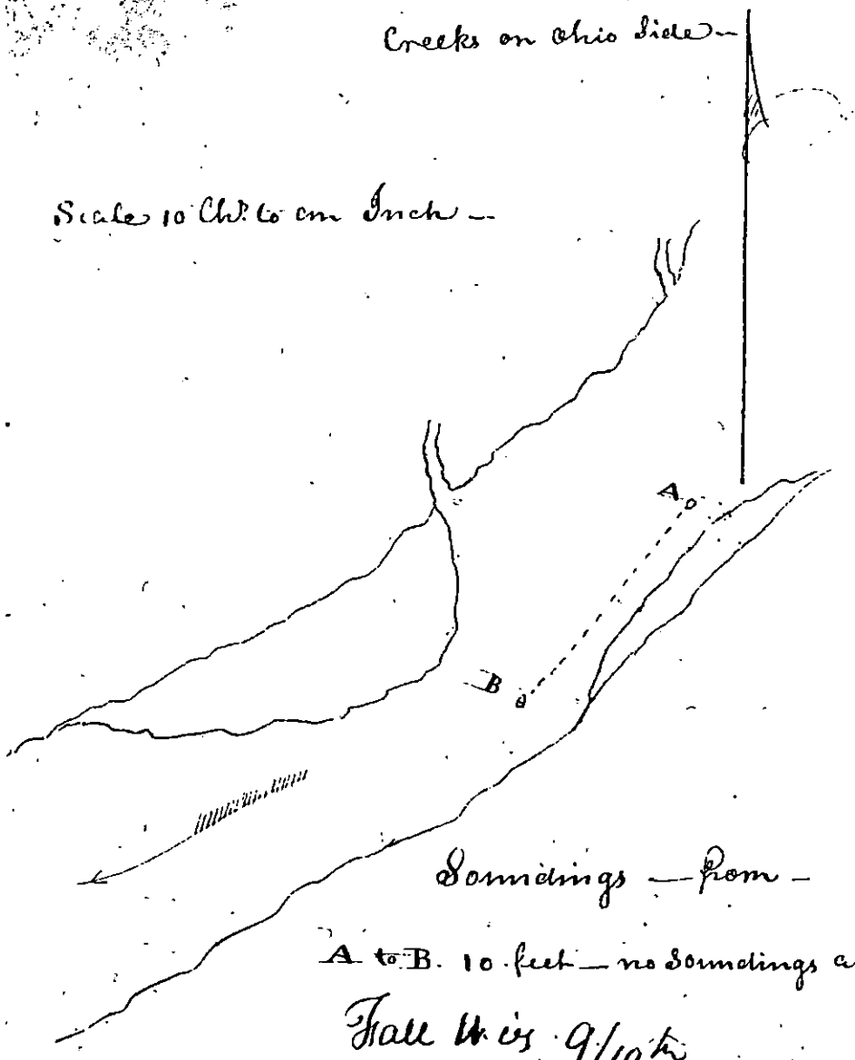
Fall 3 feet, 2 inches 2/10ths

Remarks

This Shoal is 7/8 of a mile in length and has a rapid descent. There is but a short distance on which it does not afford six feet water at this low season. The Shoal otherwise is safe.

Shoal No. 84 — About 6 miles below No 83 two Creeks on Ohio Side —

Scale 10 Ch. to an Inch —



Soundings — from —

A to B. 10 feet — no Soundings after —

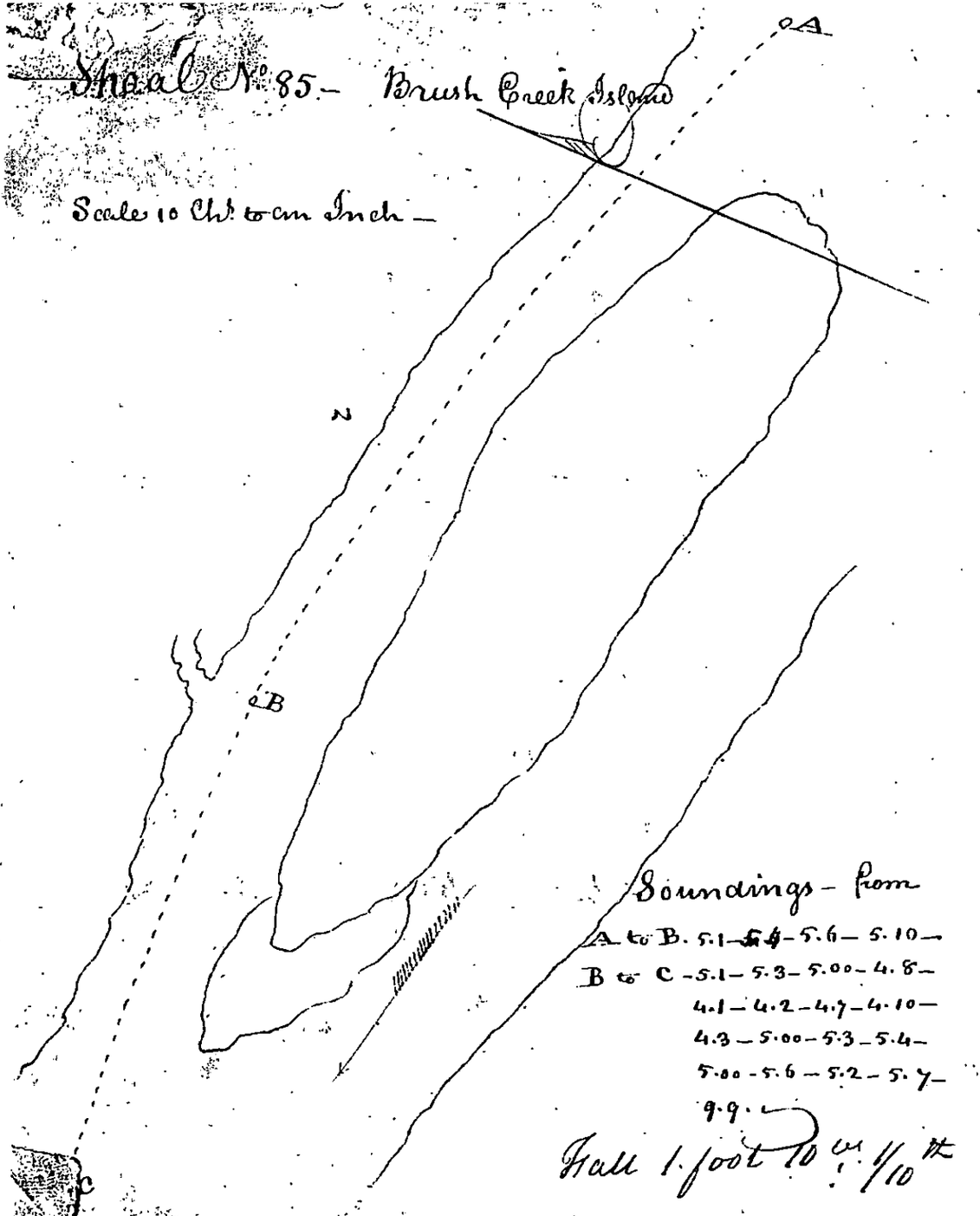
Fall 11 ins 9/10 ths

Remarks.

This Shoal is so confined with bars, as to afford a sufficiency of water for boats drawing above six feet — There is also a short bar about 1½ miles below Salt Creek which had a smooth bottom, which for 100 feet had not above five feet water, & at one place but 4 feet.

Shoal No. 85 – Brush Creek Island

Scale 10 Chs to an Inch –



Soundings – from

A to B. 5.1 ~~5.4~~ – 5.6 – 5.10 –

B to C – 5.1 – 5.3 – 5.00 – 4.8 –

4.1 – 4.2 – 4.7 – 4.10 –

4.3 – 5.00 – 5.3 – 5.4 –

5.00 – 5.6 – 5.2 – 5.7 –

9.9.

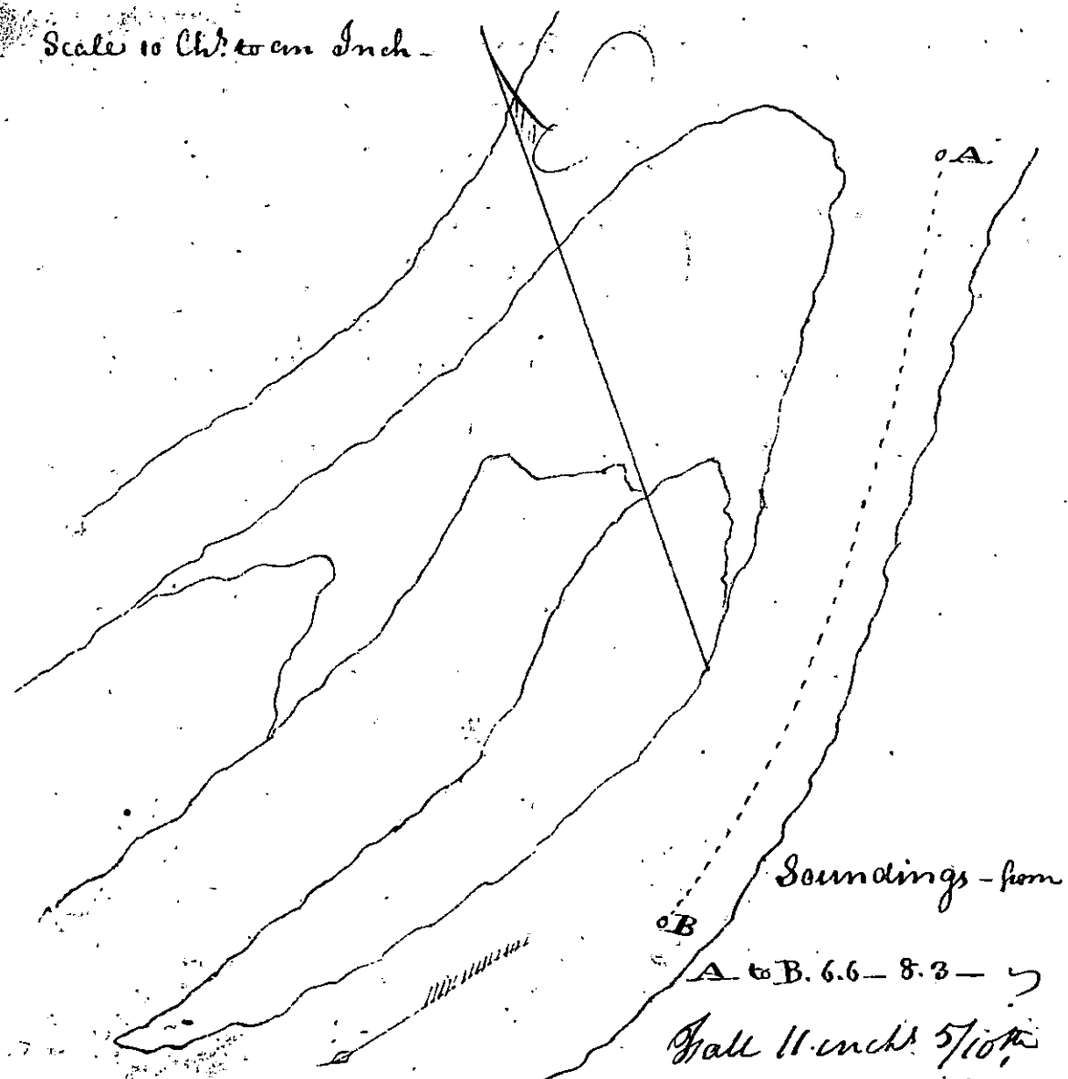
Fall 1 foot 10 ch 1/10 th

Remarks.

This is a Shoal formed by Brush Creek Island. it has a gravel Bottom. on which are deposited a number of Old Trees and Snags in or near the Channel.

Shoal N° 86— Manchester Islands—

Scale 10 Ch.s to an Inch—



Soundings—from

A to B. 6.6— 8.3—

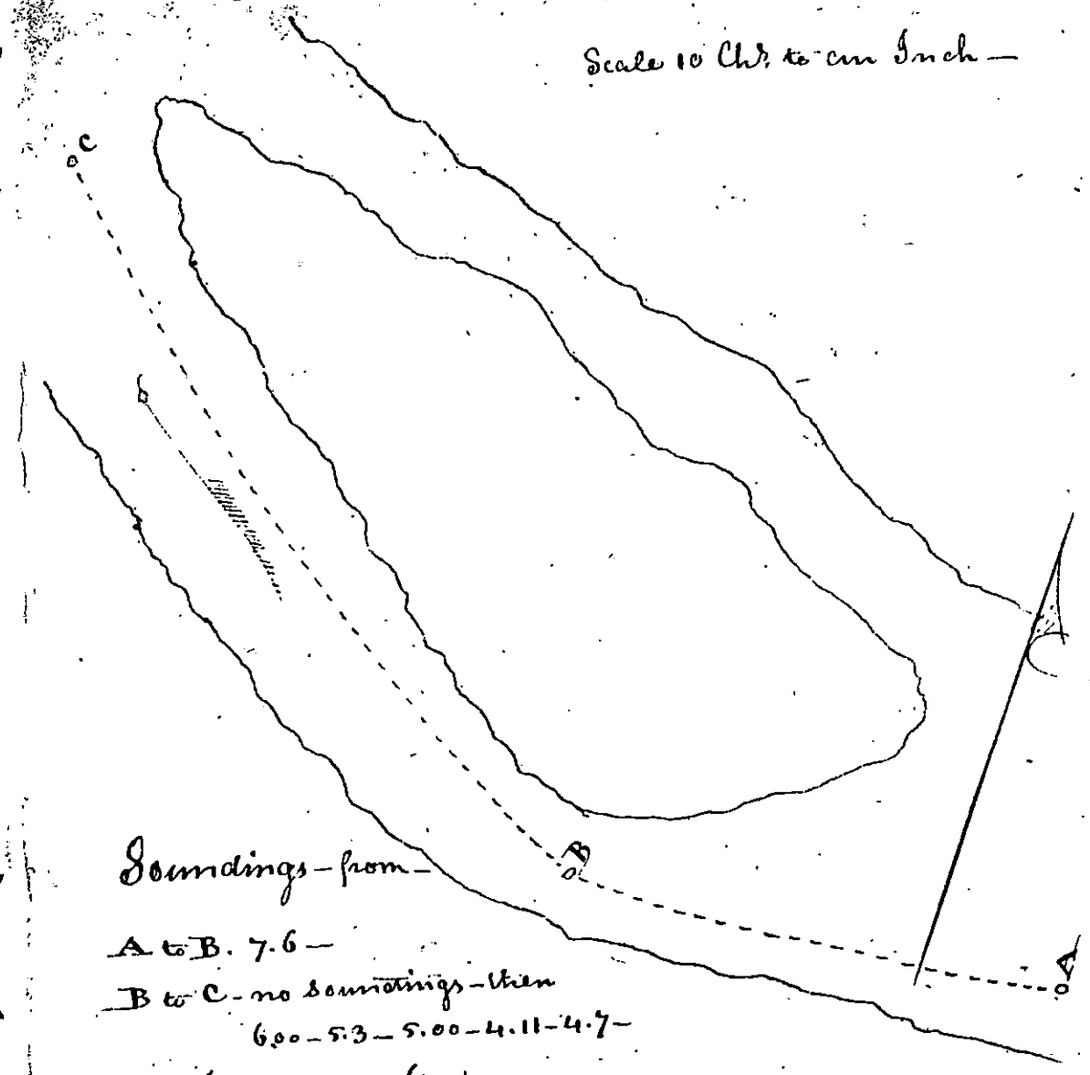
Fall 11 inch. 5/10ths

Remarks.

These Islands were surveyed in expectation that they formed considerable obstructions in the River but on examining our soundings, it appeared that six feet six inches is the shoalest place.

Shoal No. 87 — Charlestown Bar.

Scale 10 Chs. to an Inch —



Soundings — from —

A to B. 7.6 —

B to C — no soundings — then

6.00 — 5.3 — 5.00 — 4.11 — 4.7 —

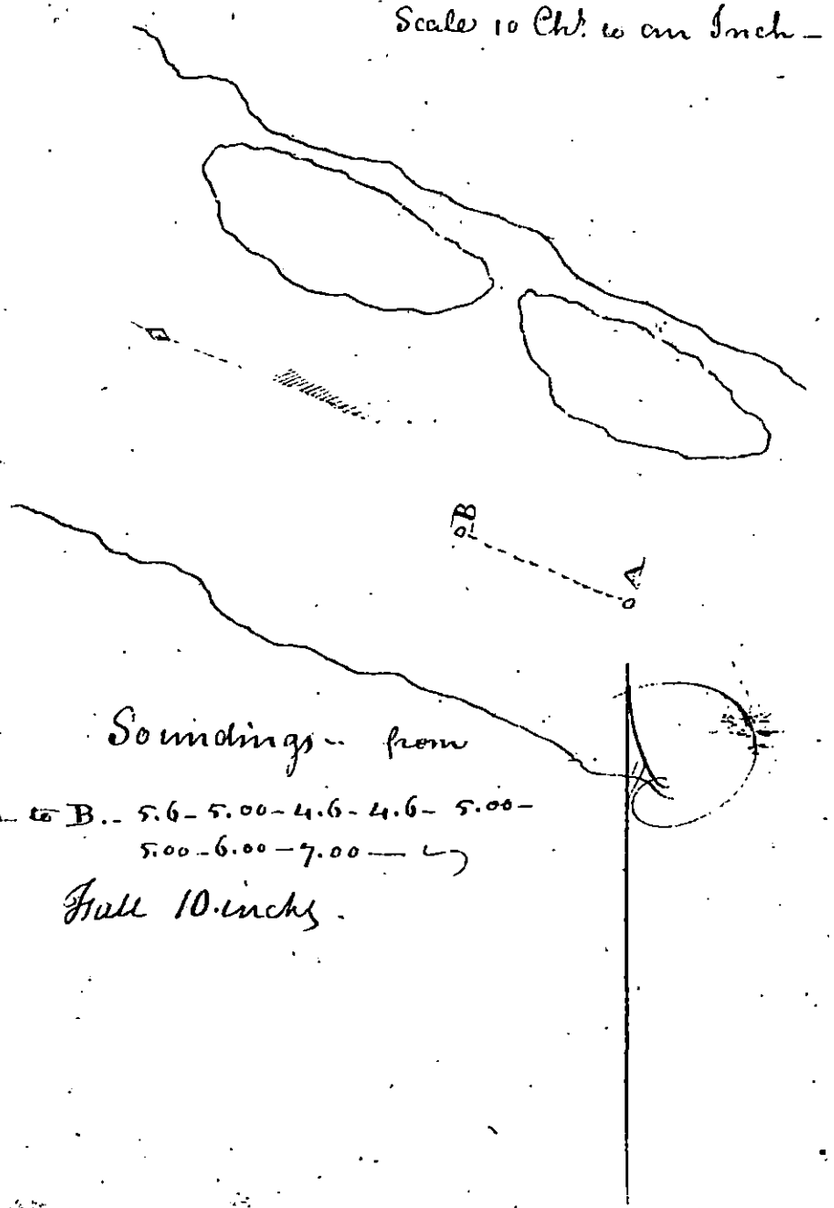
Fall 1 foot 6 inches 7/10 ths

Remarks

This Shoal is seven miles below Morgouiece — It forms very little obstruction to the navigation, the distance over the bew is very short on which there is not six feet water.

Shoal Nº 88.— Milton Bar.

Scale 10 Chs to an Inch.



Soundings from

A to B.. 5.6 - 5.00 - 4.6 - 4.6 - 5.00 -
5.00 - 6.00 - 7.00 —

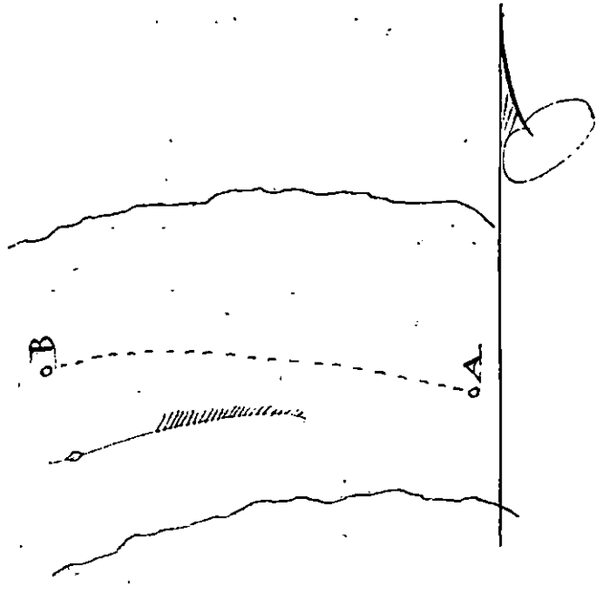
Full 10 inchs.

Remarks.

The current over this shoal is quite gentle & the bed is formed of Gravel &c. The obstruction is about four feet six inches being the shoalest water on the Bar.

Shoal Nº 89 — Whetstone's Bar

Scale 10 Chs to an Inch —



Soundings — from

A to B. 5.5 — 5.2 — 4.11 — 4.9 — 4.5 — 4.1 — 4.7 — 5.1 —
5.4 — 5.6 — 6.6 —

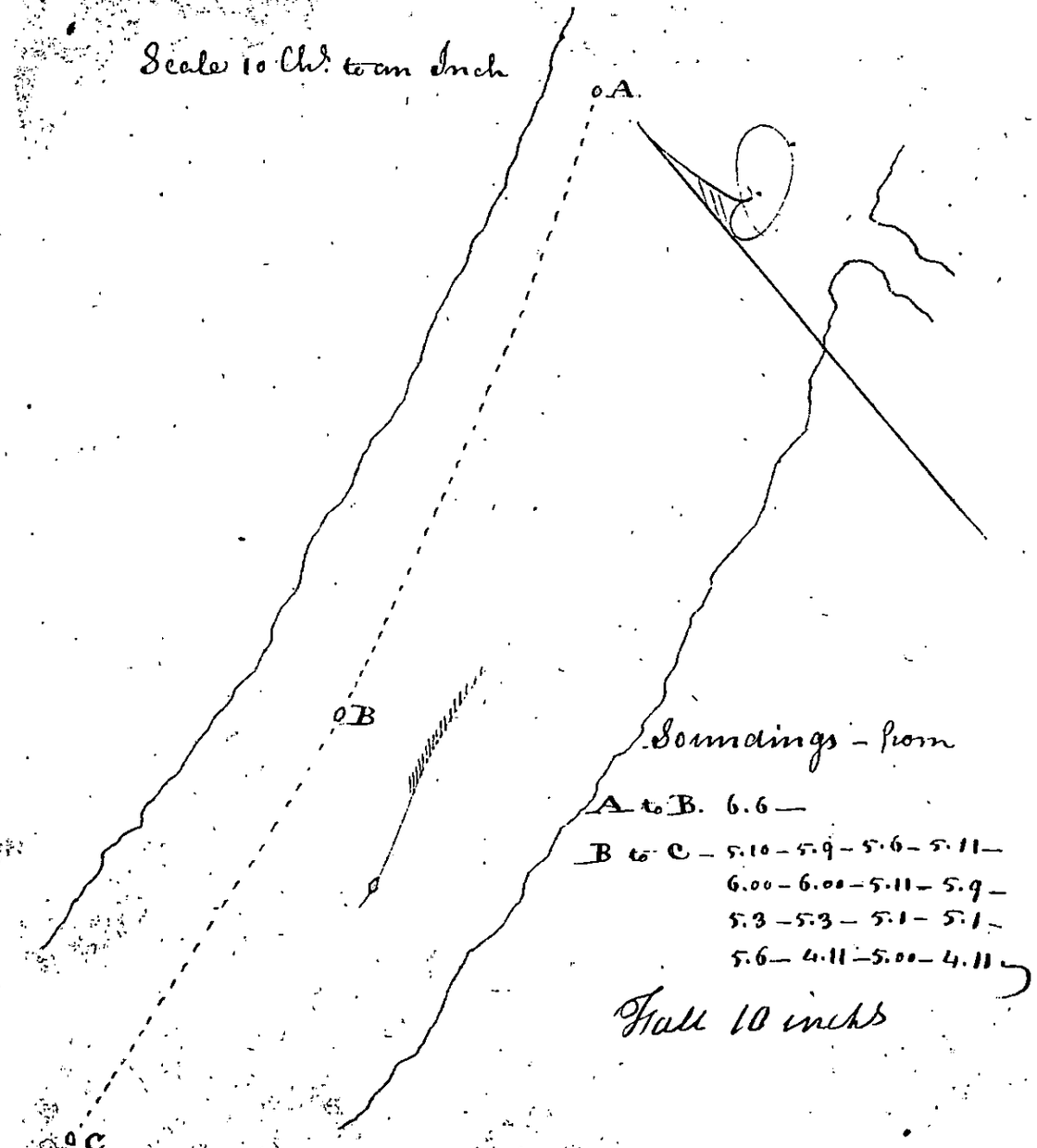
Fall 10 inchs 7/10ths

Remarks.

This is a smooth gravel shoal, forming very little and no other obstructions, than what arises from a deficiency of water on some parts of the bar.

Shoal No. 90 — Cincinnati —

Scale 10 Chs to an Inch



Soundings — from

A to B. 6.6 —

B to C — 5.10 — 5.9 — 5.6 — 5.11 —
6.00 — 6.00 — 5.11 — 5.9 —
5.3 — 5.3 — 5.1 — 5.1 —
5.6 — 4.11 — 5.00 — 4.11

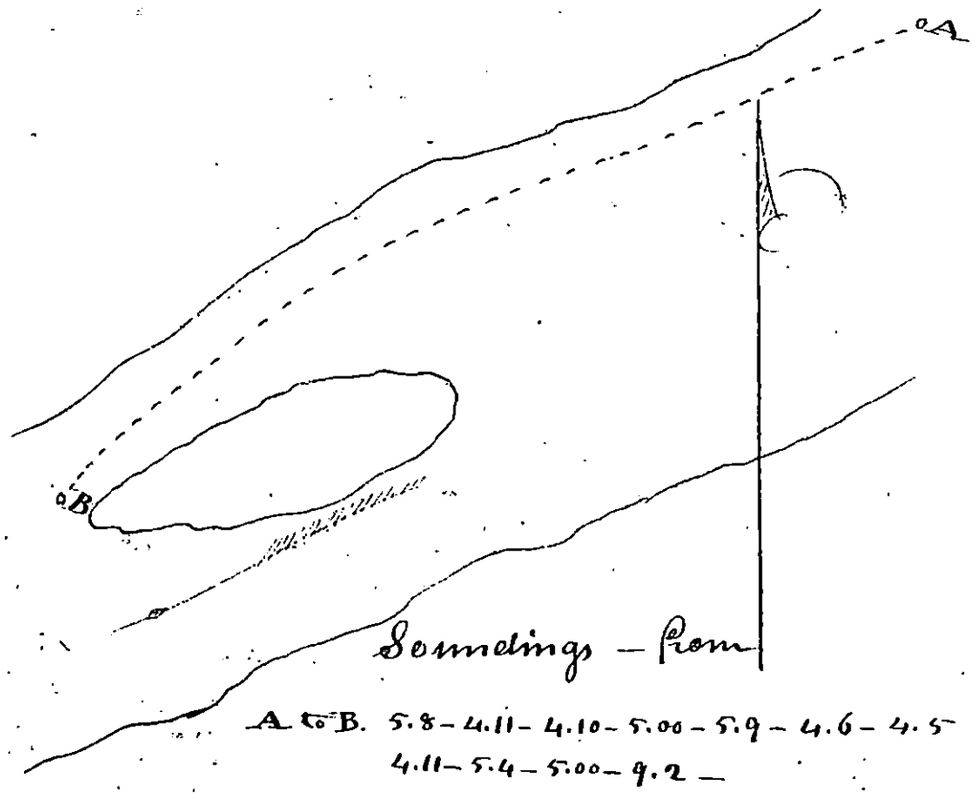
Fall 10 inches

Remarks

This bar commences opposite the upper end of the Town of Cincinnati, and extends as low as the Light ~~work~~ house. At occasions no other obstruction ~~than~~ in the River Ohio, except arises from a deficiency of water on the bar, and this at no place less than four feet Eleven inches. This bar is formed of small gravel.

Shoal No. 91 — Seven Mile Ripple —

Scale 10 Ch. to an Inch —



Soundings — from

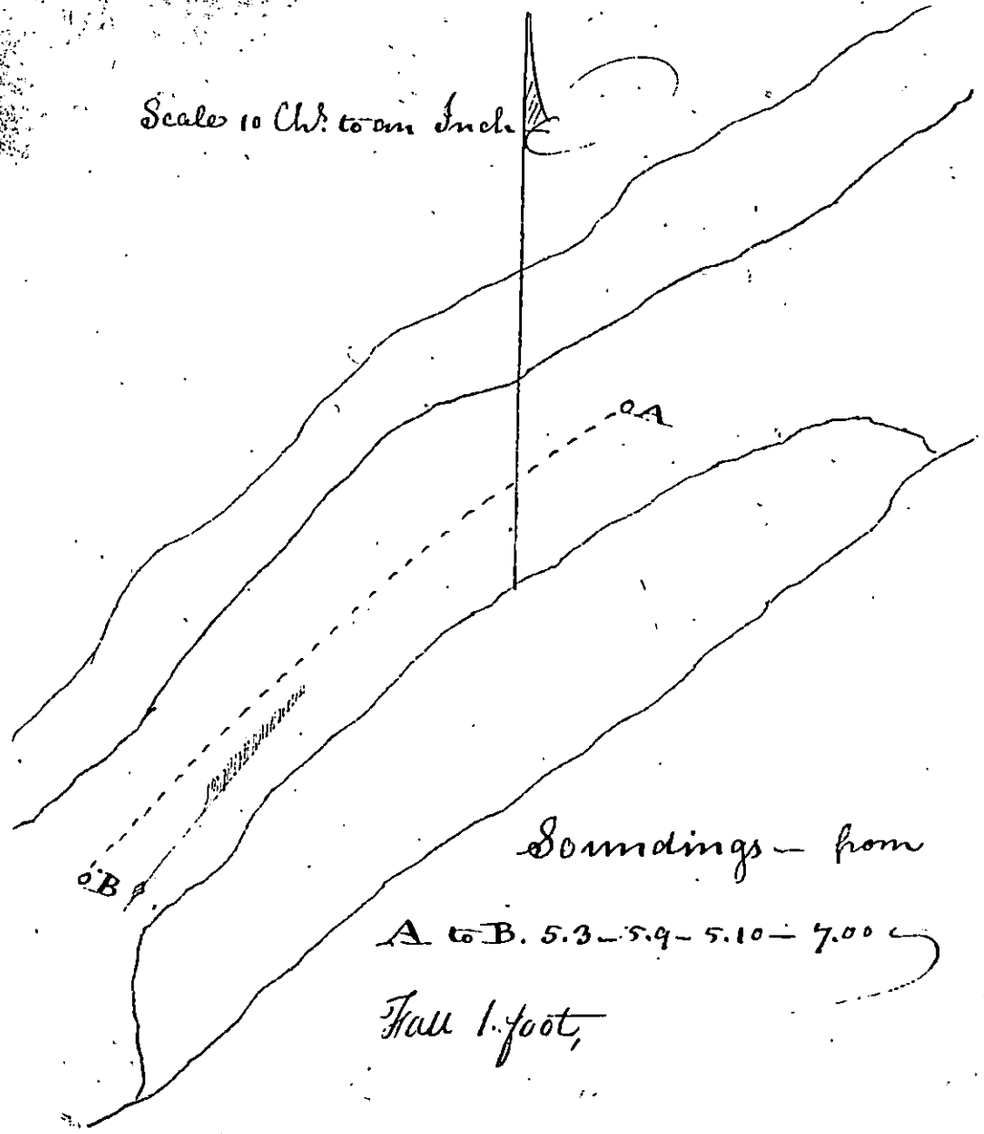
A to B. 5.8 – 4.11 – 4.10 – 5.00 – 5.9 – 4.6 – 4.5
4.11 – 5.4 – 5.00 – 4.2 —

Fall. 1 foot 10 inches 2/10 th

Remarks.

This is a gravel Bar seven miles below Cincinnati. There are several trees & snags on it in or near the Channel. The Steam boat "Vista" lies on the point of this bar.

Shoal No 92 – Great Miami –



Soundings – from

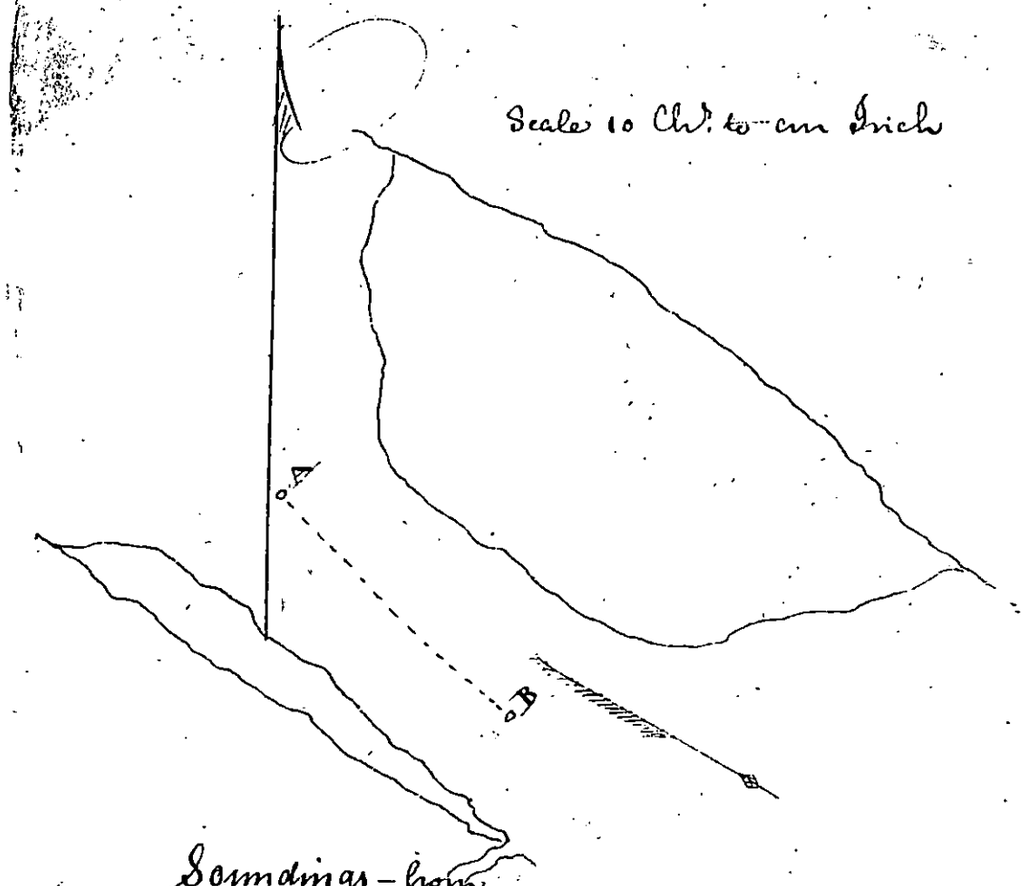
A to B. 5.3 – 5.9 – 5.10 – 7.00

Full 1. foot,

Remarks.

This bar commences a small distance
above the mouth of the Great Miami River.
The bar is formed of Sand and Gravel.
The bottom of the Channel appears
to be smooth and forms no other
obstruction than what arises from
a deficiency of water, and that,
for a short distance only.

Shoal No. 93 – Longhrey's Bar



Scale 10 Chs. to an Inch

Soundings – from

A. to B. 5.6 – 5.7 – 5.8 – 5.8 – 5.8 – 7.2

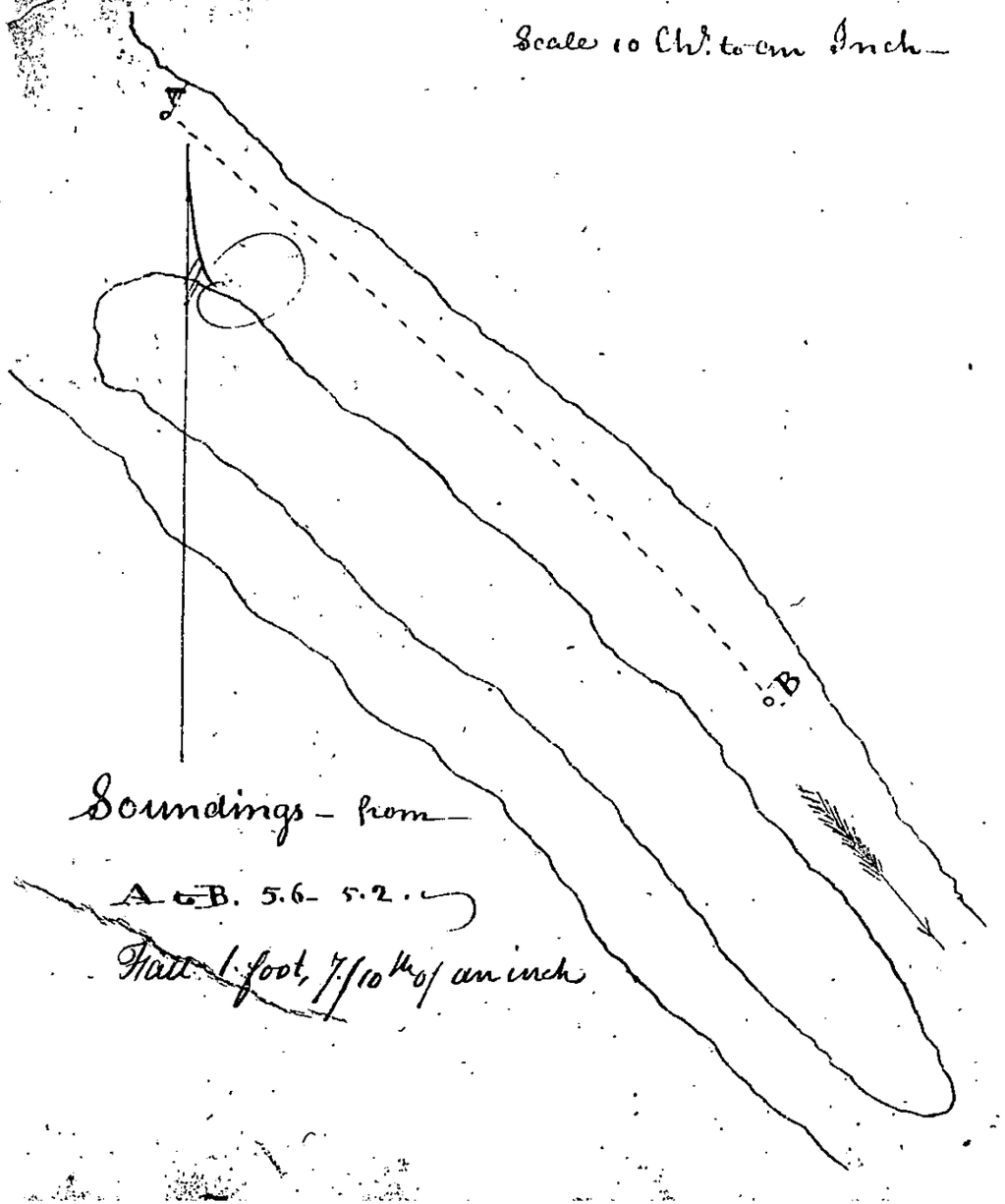
Fall 7 inches

Remarks

This been is so smooth, and the Chan=
=nel area it so deep; as scarcely to
admit of its being considered among
the obstructions.

Shoal No. 94 — Longhey's Island —

Scale 10 Ch.s to an Inch —



Soundings — from —

A & B. 5.6 — 5.2.

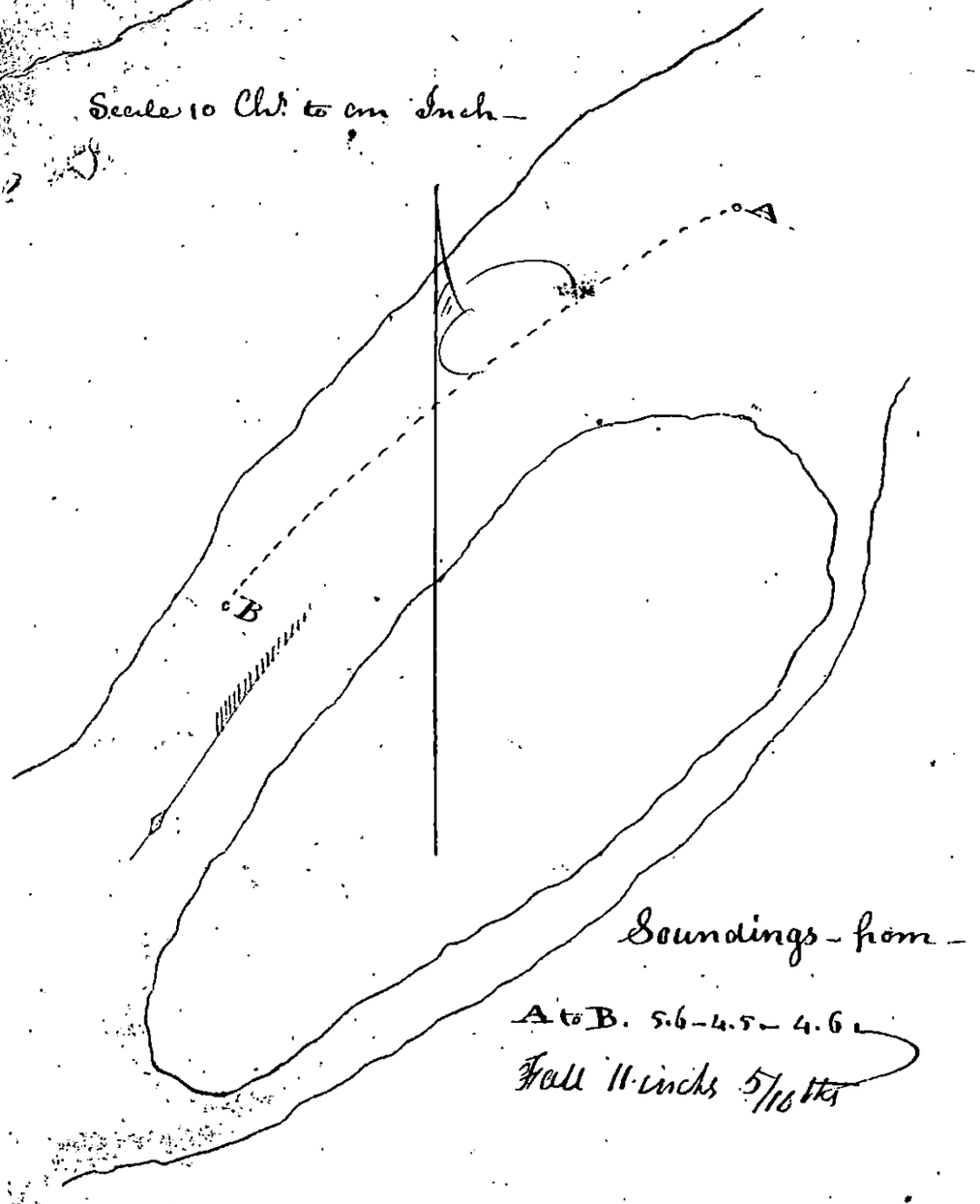
Half 1 foot, 7/10ths of an inch

Remarks —

This is a Shoal that scarcely requires to be noted and sounded — the distance being very short on which there are not six feet of water. The bottom is smooth and formed of small gravel.

Sheet No. 95 — Rising Sun Bar.

Scale 10 Chs. to an Inch —



Soundings — from —

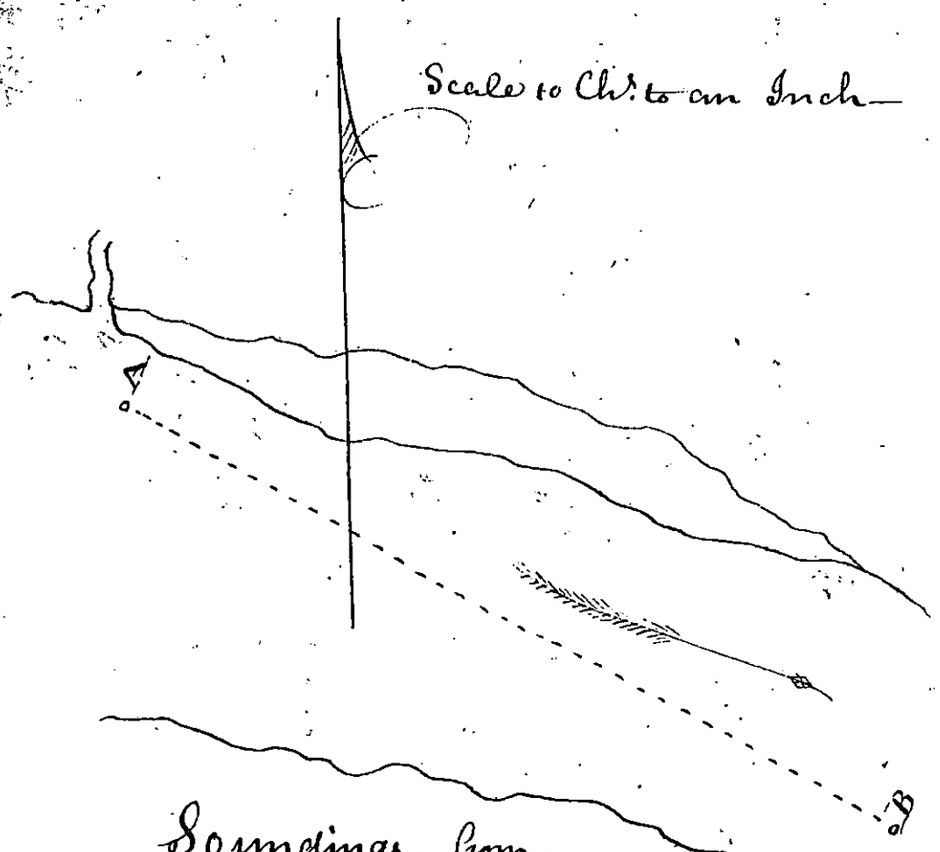
A to B. 5.6 — 4.5 — 4.6

Fall 11 inches 5/10 ths

Remarks —

This bar occupies a great part of the Ohio River at low water, but there is a very short obstruction only, where there is not six feet water on the bar. The bottom of the Channel is smooth, and of small gravel and no other obstructions on the bar.

Shoal No. 96 — Gun Powder Bar.



Soundings — from

A to B. 5.00 — 5.00 — 5.00 — 4.6 — 4.3 — 4.4 — 4.8 —
4.7 — 4.6 — 4.2 — 3.11 — 4.00 — 4.00 — 4.8 — 6.00 — 5.11 —

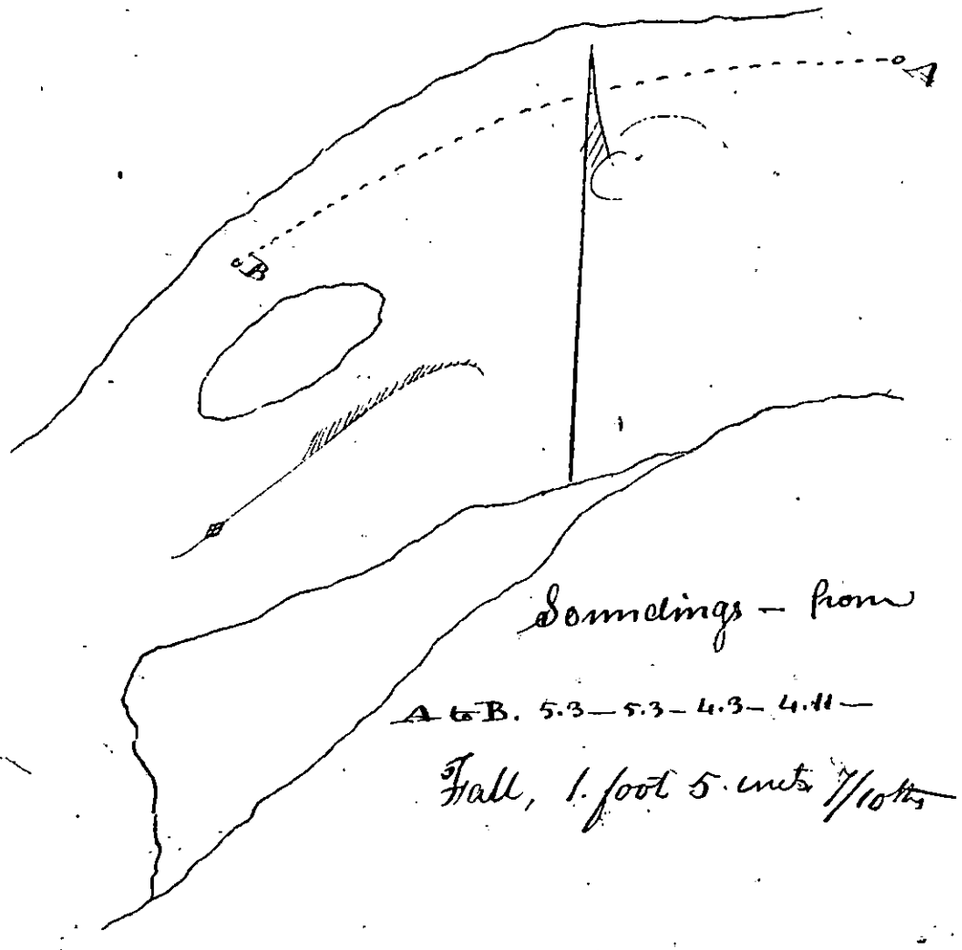
Fall. 2 feet, 2 inches 9/10ths

Remarks

This is a gravel Bar, and lies between the Rising Sun & Viaduct. There is less water on one part of this bar, than has been found on any shoal below the mouth of Big Gunpowder river.

Shoal N° 97— Neway Bar

Scale 10 Chs. to an Inch—



Soundings — from

A to B. 5.3 — 5.3 — 4.3 — 4.11 —

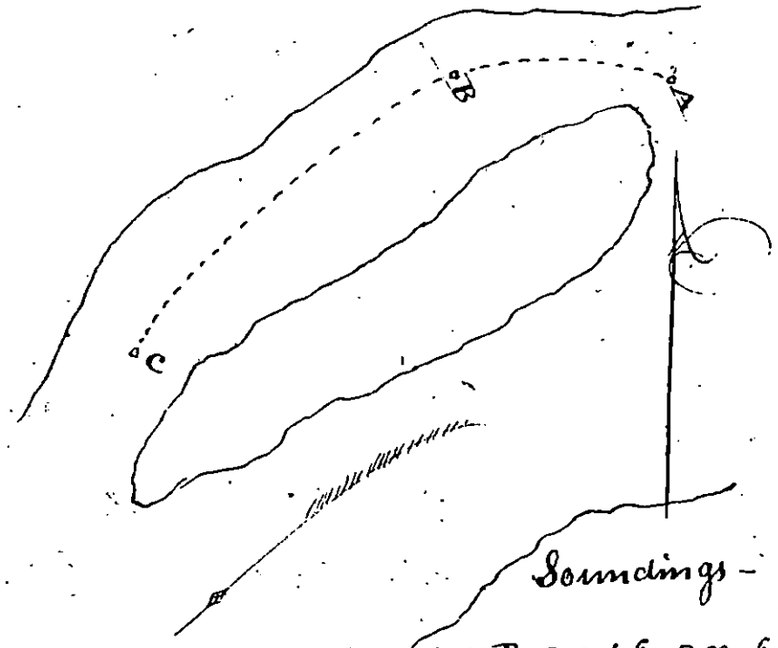
Fall, 1. foot 5. inch 7/10ths

Remarks.

There is a very little bar on the Indiana side, where we Surveyed this Crooked Shoal. At the end of the Survey, there is a small bar in the middle of the river and a Bar from Kentucky Shore, which extends along opposite Neway, and runs about half a mile below the town our Survey. It extends near the foot to the middle of the river — Also a mile below the town from the middle of the river foot of 9 mile Island, which is a mile above. town

Shoal No. 98 — Shoal 3 miles below Nevay.

Scale 10 Ch. to an Inch —



Soundings — from

A to B. 5.00 – 4.6 – 5.00 – 6.00 5.00 – 5.00
6.00 – 5.10 – 5.4 – 5.4 – 5.4 – 5.6 –
5.6 – 5.7 – 5.10 – 5.10 – 5.6 – 5.8 –
5.10 – 5.6 – 5.10 – 4.4 – 5.00 – 5.00
5.00.

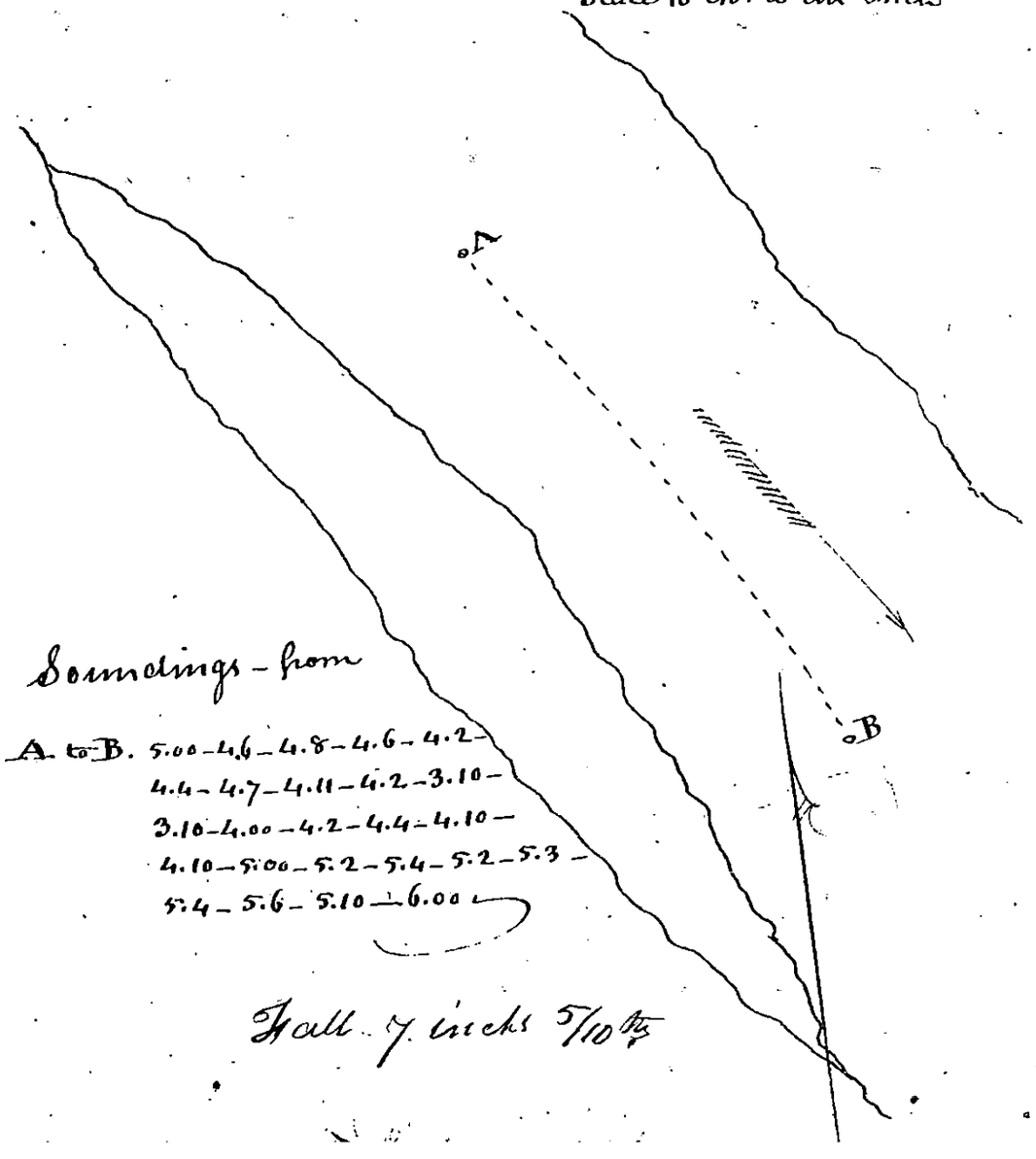
Fall 9 inches

Remarks.

This is a gentle current over a gravel bar, It forms no great obstruction, as there is no part of the shoal that has less than four feet six inches water.

Shoal N° 99 – Bar 5 Miles below Kentucky River –

Scale 10 Ch. to an Inch



Soundings – from

A. to B. 5.00 – 4.6 – 4.8 – 4.6 – 4.2 –
4.4 – 4.7 – 4.11 – 4.2 – 3.10 –
3.10 – 4.00 – 4.2 – 4.4 – 4.10 –
4.10 – 5.00 – 5.2 – 5.4 – 5.2 – 5.3 –
5.4 – 5.6 – 5.10 – 6.00

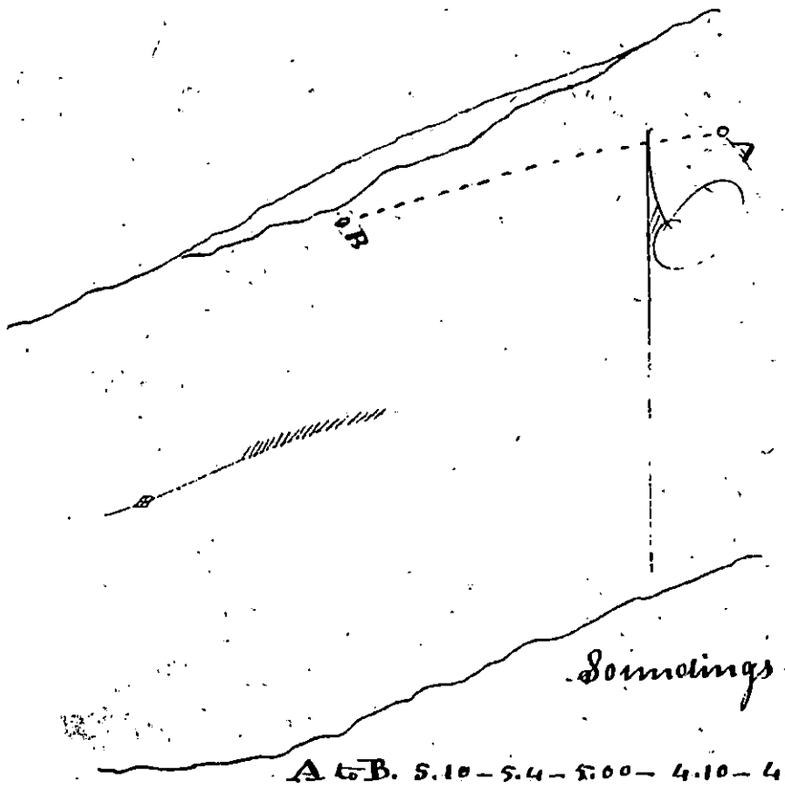
Fall 7 inches 5/10 ths

Remarks.

This Shoal is five miles below Kentucky River. Although there is but little Fall of water on this bar, this Shoal is of considerable length, and has less water on it than there is found on any other Shoal below Cincinnati. The bar consists entirely of gravel.

Shoal N° 100 — Hoglund's Bar

Scale 10 Chs. to an Inch —



Soundings — from

A to B. 5.10 — 5.4 — 5.00 — 4.10 — 4.6 — 4.4 — 5.10 — 5.10.

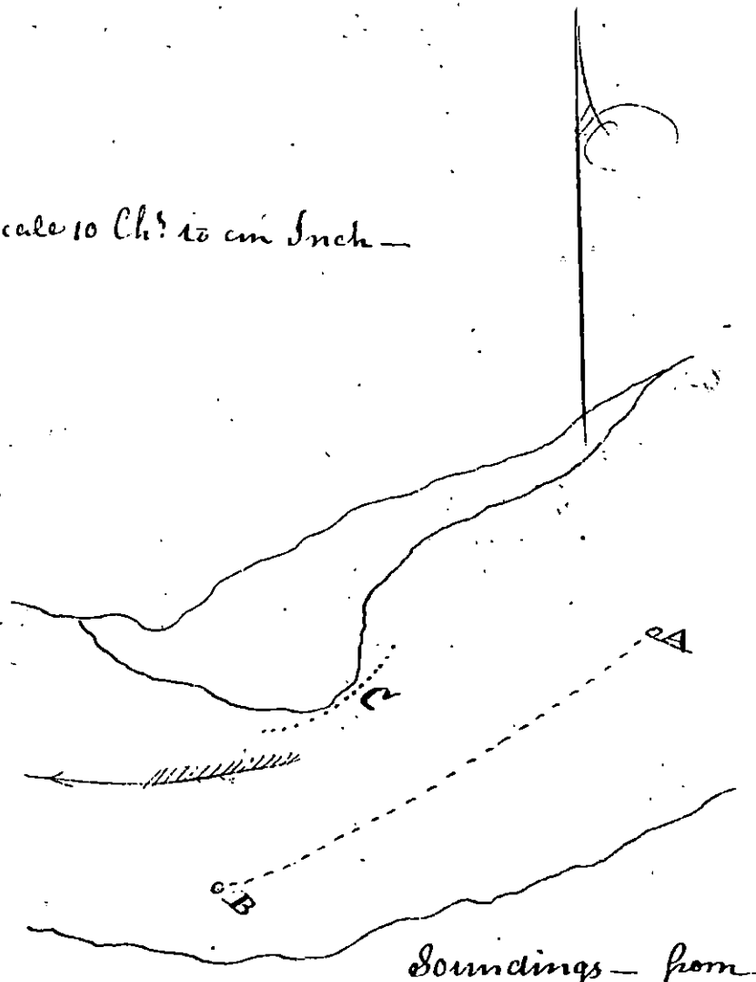
Tall 10 inches

Remarks.

This Shoal is about two miles above Madison, the Shoal is formed of several small bars cropping the Channel between which there is about six feet of water. The principal part of the Shoal, is at A a little below A. on the plat.

Shoal N.° 101 — Marques' Bar.

Scale 10 Ch.s to an Inch —



Soundings — from

A to B 5.00 — 5.11 — 4.10 — 4.8 — 3.10 — 3.6 — 5.8 — 4.10 — 4.8
4.8 — 4.6 — 4.4 — 4.8 — 4.6 — 4.2 — 4.8 — 4.10 — 4.9 —
4.10 — 5.00 5.4 — 4.10 — 4.10 — 5.00 — 5.2 — 5.00 — 5.4 —
6.00 — 5.6 — 5.10 — 6.00

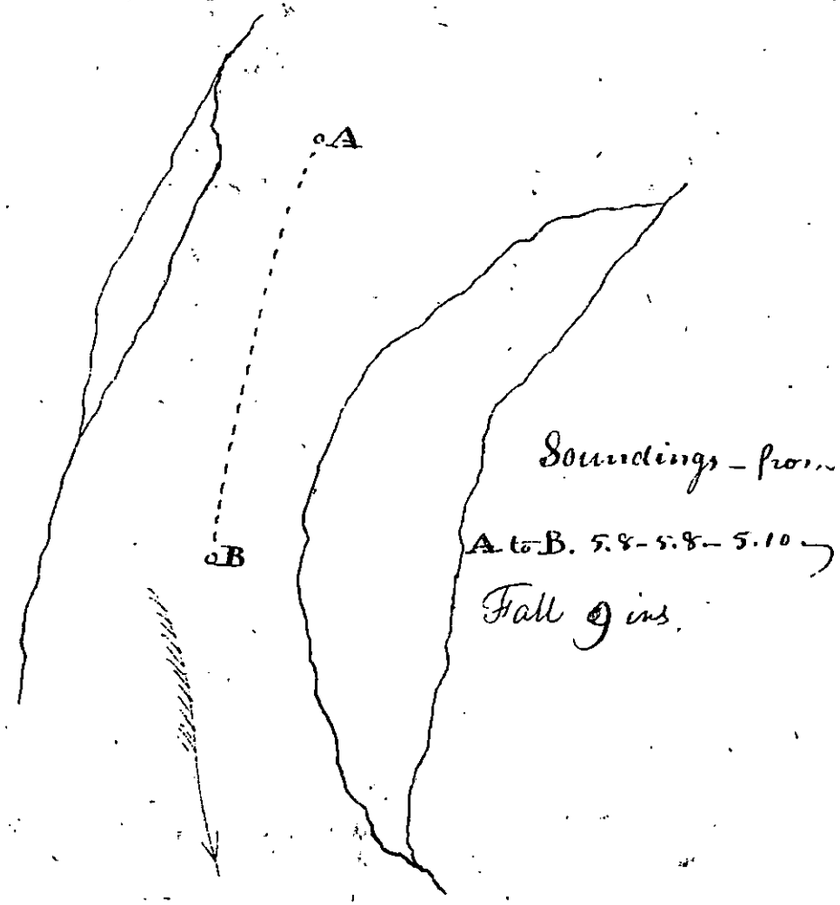
Tide, 11 ins

Remarks.

This Shoal is about one mile above Madison The Channel as represented in the Plat, follows the deepest water; but by opening a passage through a gravel bar near the Indiana Shore at C. a cheap and safe Channel could be made, as there is deep water on that Shore above & below the head of the bar represented in the plat.

Shoal No. 102 – Crawford's Bar.

Scale 10 Ch. to an Inch.



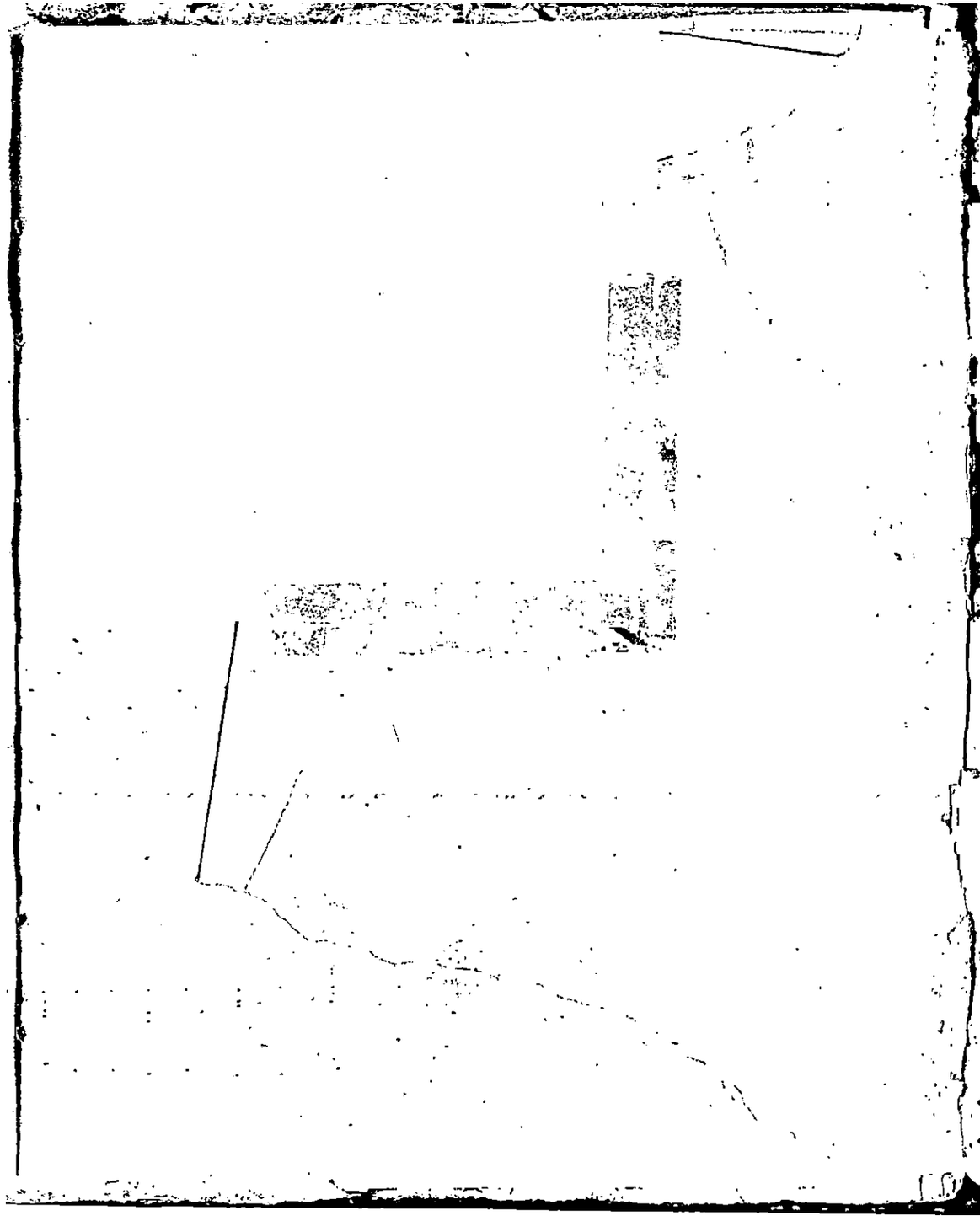
Soundings – from

A to B. 5.8 – 5.8 – 5.10

Fall 9 ins.

Remarks.

This Shoal, which is five miles below Madison can scarcely be considered an obstruction. The bar consists of gravel. the water falls gently over it. & there is no part of the Shoal on which there is less than five feet 8 inches water.



Number & Name	Depth at the right	Depth of water on the shallowest part	Date when water was at this stage	Fall	Nature of obstruction
1 Head of Brunots Isld	2	3f.0	Aug. 10.	3f.5in.7/p.	Gravel bar
2. Foot of Brunots Island	2	2.9		0.6.3	"
3. Hose Tail Ripple	3	3.6		4.3.0	Small stone & gravel
4. Lowrey's Ripple &c.	2	2.8		3.6.4	Rocks, Stone & gravel
5. Merryman's bar &c.	1	2.6		4.0.5	Stones & gravel
6. Dead Mans Shoals	1	2.6	Aug. 11.	4.6.3	Small stone & gravel
7. Lewickly bar	3	3.0		0.4.5	Gravel
8. Log Town bar	1	2.5		2.5.5	"
9. Crows Island	3	3.2	Aug. 12	1.8.0	"
10. Atkinson's bar	3	3.6		0.2.0	"
11. Beaver bar	4	3.11		2.9.7	"
12. Beaver shoal	2	2.8		3.0.2	"
13. Racoon bar	2	2.8	Aug. 13	2.3.5	"
14. Montgomery's Isld	3	3.6		2.3.5	"
15. Phillis' Island	4	3.7		1.5.0	"
16. Grape Island	4	4.0		2.0.0	"
17. Line Island	2	2.9		1.11.0	"
18. Little Yellow Creek	4	3.10		0.9.7	"
19. Baker's Island	2	2.9	Aug. 14	0.7.0	"
20. Neasly's Cluster	2	2.8		3.0.3	"
21. Tomlinsons Island	2	2.11		1.4.1	"
22. Brown's Island	1	2.4		4.0.7	Smooth Rock & gravel

Stationary

Stationary

Stationary

Stationary

23. Mills Creek bar	3	3.4	Aug. 16	0.7.2		Gravel
24. Hawkins Bar	2	3.0		1.1.0		"
25. Mingo Island	2	2.11		1.0.1		"
26 Mingo Bottom Shoals	2	3.0		0.8.7		"
27 Buffalo bar	5	4.2		0.3.0		"
28 Beech Bottom Bar	2	2.11		0.4.9		"
29. Wolf Creek bar	2	2.11	Aug. 17	0.6.5		"
30 Pike Island	3	3.1		0.4.6		"
31 Two Sisters	2	2.7		2.1.8		"
32 Wheeling Island	2	2.9		2.11.5		"
33 Boggs Island	4	3.9	Aug. 18	1.0.1		"
34 McMahon's shoal	1	2.5		1.8.6		"
35 Little Grave Creek	5	4.9		1.10.6		Lime stone Rock
36 Big Grave Creek bar	5	6.0		1.1.1		Gravel
37. Captina Island	1	2.4	Aug. 19	1.11.3		Gravel & Rock
38. Fish Creek Island	2	2.11		1.8.0		Gravel
39. Opossum bar	2	2.11		2.1.0		"
40. Fishing Creek bar	2	2.9	Aug. 20	1.7.7		"
41. Peytons Island	5	6.0		0.2.9		"
42. Williamson's Island	2	2.9		1.3.0		"
43. Pursleys Ripple	3	3.1		1.1.2		"
44. Wilsons Island	2	2.8		1.1.5		"
45. Two Williamson's Bar	4	3.7		0.6.1		"
46. Petticoat Ripple	1	2.4		1.3.1		"
47. Little Bat Island	4	4.0	Aug. 21	0.2.5		"
48 Middle Island bar	5	4.6		0.3.0		"

Rose 1/2 inch. Flattening. Jelly nine inch. Rose one inch.

49. Three Brothers	2	2.8		1.1.0		Gravel
50. Carpenters bar	2	2.7		0.4.5		"
51. Marietta	1	2.6	Aug. 24	1.3.6		"
52. Three miles below	3	3.7	Aug. 25	1.1.3		"
53. Halfway Island	5	4.11		0.2.0		"
54. Vienna Island	4	3.10		0.11.5		"
55. Blennerhasetts Is.	4	3.8		1.10.5		"
56 Little Hockhocking	5	4.6		0.7.0		Rock
57. Newbury bar	4	3.7		1.5.9		Gravel
58. Big Hockhocking	4	4.0	Aug. 26	1.7.5		"
59. Lees Creek bar	4	4.0				"
60. Belleville Island	5	4.2		2.8.0		"
61. Shade River bar	5	5.3				"
62. Two miles above Ambers.	5	5.0				"
63. Ambersons Island	2	3.0		2.10.0		Rock & Gravel
64. Big Sandy Creek	3	3.3		2.8.5		Gravel
65. Old Town bar	4	4.0	Aug. 27	2.11.0		"
66. Grave Mile Creek	3	3.2		2.1.3		"
67 Le Tarts Islands		-		2.9.62		Smooth Rock &
" " Falls	4	3.10		4.1.58		Gravel
68. Two miles below	4	4.0				"
69. Increase's bar	4	4.0				"
70. Sliding Hill bar	4	4.0		2.9.0		"
71. Eight mile Island	5	4.4	Aug. 28	1.7.7		"
72. Six mile Island	5	4.8				"
73. Big Kanawha	5	5.0				"

Flattening one inch. Falls 2 inch.

74. Gallipolis Island	5	5.6		1.10.6	Gravel
75. Raccoon Island	4	3.11	Aug. 30	1.11.0	Gravel & Rocks
76. Sixteen mile Creek	5	4.6	River fell four inches. – Ceased to mark the rise and falls of the water	1.6.2	Gravel
77. Green bottoms bar	5	4.3		1.0.5	"
78. Big Guyandotte	3	3.1		3.8.8	Rock & Gravel
79. Mouth of 12 Pole	3	3.4		0.5.2	Gravel
80 Big Sandy	4	3.11		1.6.7	Detach^d R. & Gr.
81 Ferguson's bar	5	5.4		1.6.7	Gravel
82. Little Sciota bar	4	4.0		1.6.1	"
83. Little Brush Creek	5	4.2		3.2.2	"
84. Twin Creeks	5	10.0		0.11.9	"
85. Brush Creek Island	5	4.1		1.10.1	"
86. Manchester Island	5	6.0		0.11.5	No obstruction
87 Charleston bar	5	4.8		1.6.7	Gravel
88 Milton bar	5	4.6		0.10.0	"
89. Whetstone bar	5	4.1		0.10.7	Stone & Gravel
90. Cincinnati bar	5	4.11		0.10.0	Gravel
91. Seven mile Ripple	5	4.5		1.10.2	"
92. Great Miami	5	5.3		1.0.0	"
93. Laughrey's bar	5	5.6		0.7.0	"
94 Laughrey's Island	5	5.2		1.0.7	"
95. Rising Sun bar	5	4.5		0.11.5	"
96 Gunpowder bar	4	3.11		2.2.9	"
97 Vevay bar	5	4.3		1.5.7	"
98 Three miles below	5	4.6		0.9.0	"
99. below Kentucky	4	3.11		0.7.5	"

100. Hoglands bar	5	4.2	0.10.0	
101. Marques' bar	5	4.2	0.11.0	"
102. Crawfords bar	[illegible]	5.8	0.9.0	"
103. Falls of the Ohio			24.1.4	Rock

Resolutions, relative to the Improvement of the navigation of the Ohio River

Resolved by the General Assembly of the State of Ohio, that the following propositions be made to the Legislatures of the States of Pennsylvania, Virginia Kentucky and Indiana viz. That each of the above States choose one Commissioner who shall meet the Commissioners of the several states at a time and place to be mutually agreed on in order to proceed to the Town of Pittsburgh to examine the obstructions in the Ohio River, especially the rapids and falls thereof, and noting the several impediments and probable expense that will attend their removal and in an especial manner to survey the falls of the Ohio at Louisville and to examine on which side of said falls a canal and locks can be most conveniently made or whether some other expedient may be resorted to, and to make an estimate of the [illegible] will attend the making such improvements and as soon as they have completed the survey and estimates as aforesaid they shall transmit a copy thereof to the Executives of the several states who are parties to this Compact, to be laid before their respective Legislatures; and the Governor of this State is hereby requested to continue the correspondence until the result of their deliberations shall be known, and communicate the same from time to time to the Legislature of this State.

Resolved, that if the States aforesaid shall agree to unite in the improvement of the navigation as aforesaid then and in that case the faith of this State is hereby pledged to provide funds to cover its proportion of the expences of the undertaking

Resolved, that the Senators and Representatives from this State in the Congress of the United States, be requested to use their best endeavours in the event of the creation of a fund for im-

ter improvements to procure a portion thereof for the above purpose

Resolved that his Excellency the Governor be requested to forward a copy of these resolutions to the Executive of each of the States aforesaid with a request that the same be laid before their Legislature respective Legislatures, and one copy thereof to each of our Senators and representatives in the Congress of the United States

Passed January 29th 1817

Thos Kirker
Speaker of the House of Representatives

Abraham Shepherd
Speaker of the Senate

Secretary of State Office
Columbus, Ohio, February 8. 1817

I certify the foregoing to be a correct copy of the original remaining on file in this office

John McLene
Secretary of State

Resolved by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, That Walter Lowrie be and he is hereby appointed a Commissioner on the Part of this State to meet the Commissioners who are or may be appointed by the States of Ohio, Virginia, Kentucky and Indiana or either of them, whose duty it shall be together with the said Commissioners to examine the obstructions in the Ohio River noting the probable expense that will attend their removal, and generally to perform the duties contemplated by a resolution of the State of Ohio relative to the navigation of the Ohio River, And in case of vacancy by death, resignation or otherwise the Governor is hereby authorized to appoint another Commissioner to supply such vacancy

Resolved that the Governor be requested to transmit a copy of the above Resolution to the Governors of the States of Ohio, Virginia Kentucky and Indiana

Rees Hill, Speaker of the
House of Representatives

Isaac Weaver Speaker
of the Senate

Approved the twenty fifth day of March
One thousand eight Hundred & seventeen

Simon Snyder

Secretary's Office
Harrisburg March 27th 1817

I Certify that the foregoing is a true copy of the original Resolution remaining on file in this office - Witness my hand & seal
A. B. Boileau Sec'y

Resolved by the General Assembly of the Commonwealth of Virginia, that Samuel Blackburn be, and he is hereby appointed a Commissioner on the part of this Commonwealth, to meet such Commissioners as have been, or hereafter may be appointed by the States of Ohio, Pennsylvania, Kentucky and Indiana and with such Commissioners, or such of them as may attend for the purpose to examine the obstructions to the Navigation of the Ohio River, between Pittsburgh and Shippingport and to perform all such other and further duties as are contemplated by the Resolutions of the Legislature of Ohio of the 27th of January 1817. that in the event of the death, resignation or refusal to act, of the Commissioner hereby appointed, the Governor with the advice of the Council of State shall appoint and commission a Successor and that copies of this Resolution be communicated by the Executive of this Commonwealth to the Governors of Ohio, Pennsylvania, Kentucky and Indiana

The foregoing is a true copy of a Resolution passed by both Houses of the General Assembly on the 31st day of January 1818

Wm. Munford C. H. R.

Be it enacted by the General Assembly, that Samuel Blackburn Esq. who has been appointed a Commissioner agreeably to a Resolution of the present General Assembly to act with Commissioners

appointed by the States of Pennsylvania Ohio, Kentucky and Indiana (whose duty it shall be in terms of said reso=lution, and in conjunction with such commissioner or Commissioners as have or shall be appointed by the said States or any of them, to view the Ohio River from Pittsburgh to Shippingport, and report to the next General Assembly his opinion of the practibility of improving the said River, the probable expense thereof and the prospect of advantage to this State and to the States aforesaid respectively; with such other information as he may deem important to the in=terest of this State.)

And be it further enacted that the said Commissioner shall be allowed and paid the sum of eight dollars, for each and every day he may be necessarily employed in the afore=said service, as full compensation for his services. - And all expenses incurred in the opinion of the said Commissioner and of those with whom he may be associated deemed indispensibly necessary to carry into effect the true intent and meaning of this Act, and the resolution aforesaid, shall be at the joint charge of this Commonwealth, and such of the said States as shall have engaged in that un=dertaking. -

This Act shall be in force from the passing thereof. -

Richmond, Virginia, Feby. 26th. 1816.

I do hereby certify that the foregoing is a true copy of an Act of the General Assembly of this Commonwealth passed Feb. 21st 1816 entitled "An Act ap=pointing a Commissioner to examine & direct ions to the navigation in Ohio River"

Wm. Munford C. H. D.

State of Kentucky
Secretary's Office
Frankfort 14th May 1818

Sir,

I have the honor to transmit to your Excellency the copy of a resolution passed by the Legislature of this State,

of our Legislature. Should the Legislature of your State think proper to meet the views contemplated in said Resolution, a Commissioner (General John Adair) has been appointed on the part of this State, who is ready to co-operate with the Commissioners from the other States in carrying the proposed object into effect.

I have the honor to be
Yours &c.
Gab.l Haughton

His Excellency the Governor
of Pennsylvania

Resolutions, Relative to the navigation of the Ohio River.

Resolved, by the General Assembly of the Commonwealth of Kentucky, That a Commissioner be appointed by a joint vote of the Senate and House of Representatives and in case of his death or resignation the Acting Governor is hereby authorised to appoint a successor, or successors, who shall be Commissioners who are or may be appointed by the States of Ohio, Pennsylvania, Virginia and Indiana, or either of them, whose duty it shall be, together with the said Commissioners to examine the obstructions to the navigation of the Ohio River, noting the probable expense that will attend their removal; and generally to perform the duties contemplated by a resolution of the State of Ohio, relative to the navigation of the Ohio River, bearing date on the 8th day of February 1817.

Resolved, If the States aforesaid shall agree to unite in the improvement of the navigation as aforesaid, then and in that case, the faith of this Commonwealth is hereby pledged to provide funds to cover its proportion of the expenses of the undertaking.

Resolved, That the Acting Governor be requested to transmit a copy of the foregoing Resolutions to the Governors of the States of Ohio, Pennsylvania, Virginia and Indiana.

State of Kentucky Sct
Secretary's Office May 12th 1818

I do certify, that the foregoing resolutions are correctly transcribed from the Originals filed in my Office
John Pope Secretary

Whereas, in pursuance of a resolution of the General Assembly of the State of Ohio passed January 27th 1817, the States of Pennsylvania, Virginia and Kentucky have each appointed a Commissioner on their part to do and perform the several services pointed out and required of them by said resolution
Therefore Resolved by the General Assembly of the State of Ohio that the Governor be and he is hereby authorized and required to appoint a Commissioner on the part of this State, whose duty it shall be to meet such Commissioners as have or may be appointed by the States of Pennsylvania, Virginia Kentucky and Indiana at such time and place as may be agreed on, and then and there proceed to perform the several duties pointed out by the Resolution aforesaid.
Passed Feb. 6th A.D. 1819.

Secretary of States Office
Columbus, Ohio, 30th April 1819
I certify the foregoing to be correctly copied from the original Rolls remaining on file in this Office

Jno. McLene Sec.y of State

Ethan Allen Brown
Governor of the State of Ohio
To General Edward W. Tuppes.
Greeting.

Reposing special confidence in your ability, discretion and fidelity I do hereby appoint you Commissioner on the part of the State of Ohio; in

of the Resolutions of the General Assembly of the State of Ohio, passed on the 27th. day of January 1817, and on the 8th day of February 1819, copies of which said Resolutions are hereunto annexed, authorising you by these presents, to do and perform, all and singular the duties and services required of you as Commissioner in this behalf on the part of this State.

Given under my hand and the great seal of the State of Ohio, at Columbus, this thirtieth day of April in the year of Christ one thousand eight hundred and nineteen, and forty third year of the Independence of the United States.

Ethan A. Brown

By the Governor

Jn. M'Lene Sec'y

of State.—

Mr. Baldwins estimate of the expense of a canal on the Kentucky side of the falls of Ohio, to be four feet deep at the lowest stages of the water, twenty eight feet wide at the bottom, the natural slope of the bank, forty five degrees.—

Length 465 rods equal to 7673 feet
Average depth of clay bank 14 feet
Width at average surface of lock 28 feet
Average depth of lock . . 8½ feet

The excavation of clay and earth on the above data will be equal to 167.100 cubic yards at 30 cts per cubic yard . . . $50.130.00

The rock to be removed amounts to 57.722 cubic yards at $1.50 per cubic yard . . 77.583.00

Four locks, including the Guard lock at the head of the canal, and all the timber and wood work for gates &c. at $10.000 each . . . 40.000.00

Iron and iron work for Radials gates &c, about the locks & gates . 8.000.00

amt. carried over — 175.713.00

Limestone for	$175. $13.00
Tools including Smiths forge work, shops, making wheel barrows &c.	6.000.00
Planks and other lumber for wheeling & scaffolding	3.000.00
Superintending Engineer, assistants, agents, officers &c.	20.000.00
Head work men, viz. Blacksmiths, Carpenters, and Stone Layers	3.000.00
Guard or wing walls at the head of the canal	10.000.00
Opening the passage in the bed of the river from the head of the canal to the end of the basin, twenty eight feet wide, and four feet deep, +1000 cubic yards at $1.00 per Cubic yd.	+1.000.00
Contingencies	21.287.00
Total	$240.000.00

+ It is supposed that this item was intended to have been $10.000. & is accordingly so considered in the Report

Report of the situation and progress of the Jeffersonville Ohio Canal Made by order of the Board of Directors

Length of the contemplated line of the canal from the entrance to the exit 868 per. 10 Lin

Average depth of the soil to be excavated 35 feet

Average depth of rock 11 feet

Cubic yards of earth to be removed 1433.856

+ Cubic yards of rock ... do ... 320.00

Perpendicular height of water at the entrance above that at the exit at the present low stage of the River 24 1/2 feet

Proposed breadth of the bottom of the canal 40 feet

N.B. The entrance of the canal is favourably situated for the Ingress and Egress of Boats, and from the injurious effects of high freshes, drift wood or other obstructions. At the lower extremity is a large and commodious Eddy which presents a safe harbour at all times. The shores afford

favourable situations, with firm and dry foundations for water works to any extent. A creek or river which turns a Merchant Mill all the year, terminates near the lower extremity of the canal and may be turned into it with advantage.

Progress made on the Canal.

The Site of the Canal has been grubbed and cleared of timber, with the exception of 197 rods. A Dam is nearly completed across a considerable branch, now converted into the outlet of several ponds (which are connected by drains) to direct the water into a drain on the site of the Canal, 400 Rods in length to the upper extremity 12 feet wide and from 6 to 9 feet deep. This is to try the effect of washing away the earth by water assisted by some simple machinery: a favourable result is anticipated as soon as the wet weather sets in; and when the whole route is partially opened, some calculation

some calculation is made upon the aid of the river it self in enlarging the excavation, by admitting a portion of it in times of high water, after the entrance at head is secured.

Donations of Land for the site of the Canal, and sixty feet on each side for paths, have been received from the proprietors for upwards of half the line; for the remainder (being mostly owned by non-residents, and minors, no arrangements have yet been made. In addition to the above, one gentleman has granted 20 acres lying on both sides of the Canal.

A variety of tools and other implements (even a Cart) have been provided, a Blacksmith with tools and materials is provided, and various temporary buildings for the accommodation of workmen are erected.

Subscriptions of stock to the amount of $150,000 have been obtained, the larger proportion of which is from the State of Ohio — In addition to the above, the Charter of

the

the company authorises the raising of $100.00 by way of Lottery in different classes, the first class of which is now drawing.

The company has already been organized about fourteen months, and have expended about $8000. in actual operations.

Christopher Harrison Pres.
of the B of D of the J.C.C Comp.

Jeffersonville Oct 10th 1819

James Flint Civil Engineer

* Note, In the report of the Commissioners this item is given as here stated with the addition of two feet in depth - Taking however 11 feet for the average depth of rock and allowing a slope of ten degrees the number of cubic yards will be upwards of 60.000 less than is here stated. This will lessen the expence of the Indiana Canal about seventy thousand dollars

dollars. It is probable however that the Company may have assumed some average depth other than eleven feet as it is not likely a mistake of such magnitude should have escaped them.

From the above data there also appears to be a difference of upwards of one hundred thousand cubic yards of earth. The cause of these differences has not been explained to the Commissioners.

The following statement will shew the amount of monies expended by the Commissioners in their opinion indispensibly necessary to enable them to proceed with the examination.

Wages of Pilot & hands	$437.75
Magnus M. Murray Surveyor 100 days at $3.00 per day	300.00
Do for expence going and returning, & boarding whilst making drafts	78.71
N. Gates & W. Preston for services writing	26.00
Additional stores for hands	53.34½
Stationary equipments & repairs to Boat	101.41
Total	997.21½
One fourth part of which is	249.30½
To which add one fourth of costs of boat &c. at Pittsburgh	100.00
Proportional expense of each state	349.30½

(Note. The expences were paid by the Commissioners from Virginia, Ohio & Pennsylvania in equal Proportions, and there are due to each of them from the State of Kentucky, the sum of Eighty three dollars ten Cents, which sum (Pers. Accts. will) endeavour to have forwarded to the different Commissioners

The foregoing Acct. is the one settled by the Commissioners..

(Magn. M. Murray)