

The nature of the material in the Missouri "bottom," is shewn in the following table. This is all formed from deposits from the river.

No. of Sample	Description.	Weight.	
		Per cub ft. lbs.	P. 3" cb lbs. oz.
No. 1.	Sand from surface, stratum 18" thick.....	61 $\frac{1}{4}$	0 15 $\frac{3}{4}$
	Same, shaken down, microscopic grains of sand	74	1 2 $\frac{1}{2}$
" 2	Two feet from surface, 4" thick. Clay, organic matter and fine sand.....	74 $\frac{1}{4}$	1 2 $\frac{1}{6}$
	Same, shaken .....	81 $\frac{1}{4}$	1 4 $\frac{5}{6}$
" 3	Next stratum, 2" thick ; little organic matter. ....		
" 4	Next stratum, 6" thick ; sand nearly as fine as No. 1.....	67	1 0 $\frac{1}{2}$
	Same, shaken down.....	81 $\frac{1}{4}$	1 3 $\frac{1}{6}$
" 5	Stratum, 1" thick, similar to No. 1.....	64	1 0
	Same, shaken down .....	81 $\frac{1}{4}$	1 4 $\frac{5}{6}$
" 8	Seven feet from surface, clean sand crystals, as fine as in No. 4, some loam .....	86	1 5 $\frac{1}{2}$
	Same, shaken down .....	97	1 8 $\frac{1}{4}$
	Sand from pit on East side ; coarse, with small fragments of lignite and gravel.....	97	1 8 $\frac{1}{4}$
	Same, shaken down.....	109 $\frac{1}{2}$	1 11 $\frac{5}{6}$
	Sand from pit East bar .....	103 $\frac{1}{2}$	1 7 $\frac{3}{8}$
	Same, shaken.....	113 $\frac{1}{2}$	1 9 $\frac{5}{8}$
	Drifting sand from East bar.....	94	1 7 $\frac{1}{2}$
	Same, shaken down.....	108	1 11

The sediment carried in suspension in the river was examined and was found to consist chiefly of sand in the following quantities, taken from different localities.

Amount of water in all cases was a gallon.

Weights.			Weight per cub. In.		Remarks.
Filtrate.	Filter.	Sediment.	Loose.	Pressed.	
g. mill'g	g. mill'g.	g. mill'g.	g.	g. mill'g.	
47.360	15.200	32.160	22	25.970	Surface of channel.
21.150	7.250	19.900	22	25.970	"
40.800	15.25	25.350	22	25.970	"
43.400	7.700	35.900	22	25.970	Bottom at bridge.
		108.310 =	27.0775 Mn	Water per	gal. = 104.26 cub. in.
	1.4426 x 6.	2324 = 6.49	75 Cub. In.	in one cub.	foot of water.

The discharge of sediment is as follows :

At low water, 78. cub ft. per sec. 73.5 or cub. yds. per 24 h., 235200

" med " 86. " " 187.22 " " 500.121

47.360	15.260	32.160	22	25.970	Surface of channel
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