



## Deepwater Oil Spill - Incremental Progress at Best - Varying the Junk Mix and Cutting the Flow --also Live Comment Thread

Posted by [Heading Out](#) on May 29, 2010 - 1:10pm

Topic: [Environment/Sustainability](#)

Tags: [bop](#), [deepwater horizon](#), [junk shot](#), [oil spill](#) [[list all tags](#)]

**New thread, please redirect to <http://www.theoil Drum.com/node/6536>.** Moving on the LMRP process, topkill process has been abandoned. More as we learn it.

### VIDEO MOVED BELOW FOLD

HO's post about varying the junk mix, and cutting the flow, and the video are below the fold. Please click, "there's more".

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<http://www.cnn.com/video/flashLive/live.html?stream=3>

<http://www.cnn.com/video/flashLive/live.html?stream=stream/3&hpt=T1>

The video from the remotely operated vehicles (ROVs) monitoring the Deepwater oil leak from the well in the Gulf of Mexico shows that the at around 10:45 am Central time, they may have started another junk shot injection, given that the flow from the riser has just increased, and various large particles have been coming past the camera. When they are injecting mud, the contrast on the picture gets somewhat worse, and so it is probably better if you [check this out for yourself](#). The riser is continuing to flow mud.

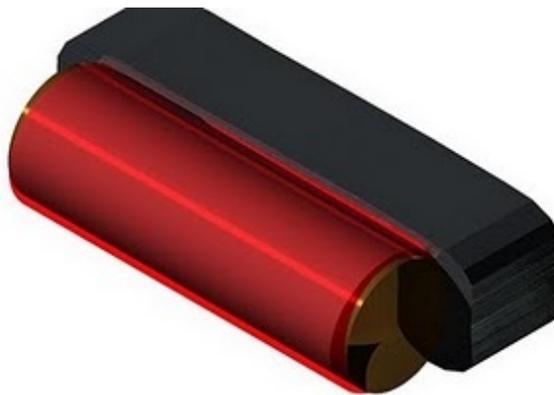


	A	E	F	G	H	I	J	K	L	M	N
1			Flow in gpm per jet.			Discharge Coefficient			0.6		
2			Jet Pressure (psi)								
3	nozzle dia (in)	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	12,000	14,000
4	0.706	501.17	578.70	647.01	708.77	765.55	818.41	868.06	915.01	1002.35	1082.66
5	0.657	434.02	501.16	560.32	613.80	662.97	708.75	751.74	792.41	868.04	937.59
6	0.621	387.76	447.74	500.59	548.37	592.31	633.21	671.62	707.95	775.52	837.65
7	0.594	354.77	409.66	458.01	501.73	541.93	579.34	614.49	647.72	709.55	766.40
8	0.571	327.83	378.55	423.23	463.62	500.77	535.35	567.82	598.54	655.66	708.20
9	0.552	306.38	353.77	395.53	433.28	468.00	500.31	530.66	559.37	612.75	661.85
10	0.536	288.87	333.56	372.93	408.53	441.26	471.73	500.34	527.41	577.75	624.04
11	0.522	273.98	316.36	353.71	387.47	418.51	447.41	474.55	500.22	547.96	591.86
12	0.499	250.37	289.10	323.22	354.07	382.44	408.85	433.65	457.11	500.74	540.86
13	0.480	231.67	267.50	299.08	327.62	353.87	378.31	401.26	422.96	463.33	500.45

You can see that the largest dimension of the flow channel is just over 0.7 inches. (Which means that the BOP rams functioned over at least the majority of their stroke). The minimum is about half an inch, and if I change the discharge coefficient from 0.6 to 0.85 then the diameter range goes from 0.4 to 0.6 inches.

So from this we know that the maximum gap in the BOP is 0.7 inches in diameter. Now this is good news because it means that it is less than a third of the diameter of the feed line (which has an effective inner diameter of possibly 2.7 inches or so).

So we can continue, as they are, to send particles down through the riser to the BOP. But we also know that the flow path through the riser could be a long thin crack, rather than the round hole we used in the example above. So to address that problem a different particle shape and type is needed. Consider now what happens if we send some wire down the line with a thin rubber coating (so we don't damage the fittings on the way down) and give it say a diameter of 0.4 inches. This is small enough to get through the pipes, but if the crack is narrower than this the wire, because of its shape, will be pulled across the crack, thus:



*Wire fills a longer part of the crack if it is flexible enough to follow it.*

Of course the cracks won't run straight, and thicker wire is stiff, so after a while they will probably introduce wires of differing diameters. But this may be the next step in the process.

At the moment (noon) it looks as though they are still pumping mud, so they may be trying to use a slightly heavier mud in order to get balance, though again they are constrained on how heavy they can make this before they start losing it into the formations.



