

Lampiran C. Perhitungan Hidrolika (*Hole Cleaning*)

C.1. Hidrolika 26"

ANNULAR VELOCITY (AV)			48.92	FT/MIN		
GPM	1300		$V_a = \frac{24.48 \times Q}{D_2^2 - D_1^2}$			
ID HOLE	26	IN				
OD DP	5	IN				
SLIP VELOCITY (VS)			8.01	FT/MIN		
ID CUTTING MW	0.3	IN	$V_s = 174.7 \frac{dp \times (\rho_p - \rho_f)^{0.667}}{\rho_f^{0.333} \times \mu_e^{0.333}}$			
	8.7	PPG				
	1.05	SG				
LIFTING CAPASITY	83.63	%				
	$LC = \frac{Va - Vs}{Va} \times 100\%$					
YP	30					
PV	20					

CUTTING CAPACITY ANNULUS (CCA)	SKENARIO 1	1.73	%	$CCA = \frac{ROP \times D^2}{14.7 \times LC \times Q} \times 100\%$
	SKENARIO 2	4.20	%	
	SKENARIO 3	3.48	%	
	SKENARIO 4	3.48	%	
	SKENARIO 5	3.48	%	

C.2. Hidrolika 17.5"

ANNULAR VELOCITY (AV)		87.11	FT/MIN
GPM	1000	$V_a = \frac{24.48 \times Q}{D_2^2 - D_1^2}$	
ID HOLE	17.5 IN		
OD DP	5 IN		
SLIP VELOCITY (VS)		10.21	FT/MIN
ID CUTTING	0.3 IN	$V_s = 174.7 \frac{dp \times (\rho_p - \rho_f)^{0.667}}{\rho_f^{0.333} \times \mu_e^{0.333}}$	
MW	8.7 PPG		
	1.05 SG		
LIFTING CAPASITY	88.28 %	$LC = \frac{V_a - V_s}{V_a} \times 100\%$	
YP	25		
PV	20		

CUTTING CAPACITY ANNULUS (CCA)	SKENARIO 1	1.60	%	$CCA = \frac{ROP \times D^2}{14.7 \times LC \times Q} \times 100\%$
	SKENARIO 2	2.55	%	
	SKENARIO 3	2.12	%	
	SKENARIO 4	2.81	%	
	SKENARIO 5	3.12	%	