

International Well Control Forum

Surface BOP Kill Sheet - Deviated Well (Metric/Bar)

DATE : _____

NAME : _____

FORMATION STRENGTH DATA:

SURFACE LEAK -OFF PRESSURE FROM FORMATION STRENGTH TEST bar

DRILLING FLUID DENS. AT TEST kg/l

MAX. ALLOWABLE DRILLING FLUID DENSITY =
 $(B) + \frac{(A)}{\text{SHOE T.V. DEPTH} \times 0.0981} = \text{(C)} \text{ kg/l}$

INITIAL MAASP =
 $((C) - \text{CURR. DENS.}) \times \text{SHOE T.V. DEPTH} \times 0.0981$
 = bar

PUMP NO. 1 DISPL.	PUMP NO. 2 DISPL.
l / stroke	l / stroke

SLOW PUMP RATE DATA:	(PL) DYNAMIC PRESSURE LOSS	
	PUMP NO. 1	PUMP NO. 2
SPM	bar	bar
SPM	bar	bar

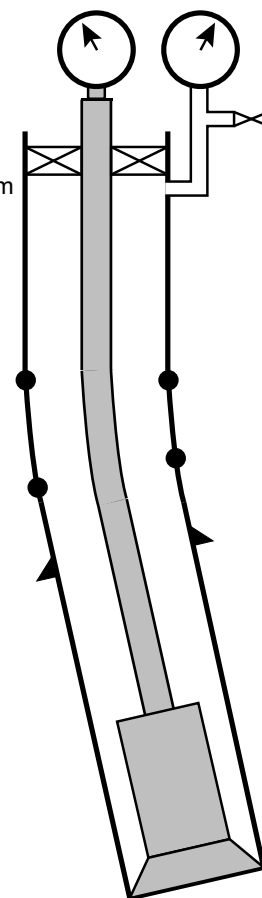
CURRENT WELL DATA:

DRILLING FLUID DATA:
 DENSITY kg/l
 GRADIENT bar/m

DEVIATION DATA:
 KOP M.D. m
 KOP T.V.D. m
 EOB M.D. m
 EOB T.V.D. m

CASING SHOE DATA:
 SIZE in
 M. DEPTH m
 T.V. DEPTH m

HOLE DATA:
 SIZE in
 M. DEPTH m
 T.V. DEPTH m



PRE-RECORDED VOLUME DATA:	LENGTH m	CAPACITY l / m	VOLUME litre	PUMP STROKES stks	TIME minutes
DP - SURFACE TO KOP	x	=		(L) stks	
DP - KOP TO EOB	x	=	+	(M) stks	
DP - EOB TO BHA	x	=	+	(N1) stks	
HEVI WALL DRILL PIPE	x	=	+	(N2) stks	
DRILL COLLAR	x	=	+	(N3) stks	
DRILL STRING VOLUME			(D) l	stks	min
DC x OPEN HOLE	x	=			
DP / HWDP x OPEN HOLE	x	=	+		
OPEN HOLE VOLUME			(F) l	stks	min
DP x CASING	x	=	(G) +	stks	min
TOTAL ANNULUS VOLUME			(F+G) = (H) l	stks	min
TOTAL WELL SYSTEM VOLUME			(D+H) = (I) l	stks	min
ACTIVE SURFACE VOLUME			(J) l		
TOTAL ACTIVE FLUID SYSTEM			(I+J) l		

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KICK DATA :

SIDPP bar

SICP bar

PIT GAIN litre

KILL FLUID DENSITY	CURRENT DRILLING FLUID DENSITY	+	$\frac{\text{SIDPP}}{\text{TVD} \times 0.0981}$		
KMD	+	$\frac{\text{.....}}{\text{.....} \times 0.0981}$	=	
				 kg / l

INITIAL CIRC. PRESS.	DYNAMIC PRESSURE LOSS + SIDPP				
ICP	+	=	
				 bar

FINAL CIRCULATING PRESSURE	$\frac{\text{KILL FLUID DENSITY}}{\text{CURRENT DRILLING FLUID DENSITY}} \times \text{DYNAMIC PRESSURE LOSS}$				
FCP	x	=	
				 bar

DYNAMIC PRESSURE LOSS AT KOP (O)	$PL + \left[(FCP-PL) \times \frac{KOPMD}{TDMD} \right]$		=		
 bar

REMAINING SIDPP AT KOP (P)	$\text{SIDPP} - \left[(KMD - OMD) \times 0.0981 \times KOPTVD \right]$		=		
 bar

CIRCULATING PRESS. AT KOP (KOP CP)	(O) + (P) =				
 +		=	
				 bar

DYNAMIC PRESS. LOSS AT EOB (R)	$PL + \left[(FCP-PL) \times \frac{EOBMD}{TDMD} \right]$		=		
 bar

REMAINING SIDPP AT EOB (S)	$\text{SIDPP} - \left[(KMD - OMD) \times 0.0981 \times EOBTVD \right]$		=		
 bar

CIRCULATING PRESS. AT EOB (EOB CP)	(R) + (S) =				
 +		=	
				 bar

(T) = ICP - KOP CP = - = bar	$\frac{(T) \times 100}{(L)} = \frac{\text{.....} \times 100}{\text{.....}} = \text{.....} \frac{\text{bar}}{100 \text{ strokes}}$
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(U) = KOP CP - EOB CP = - = bar	$\frac{(U) \times 100}{(M)} = \frac{\text{.....} \times 100}{\text{.....}} = \text{.....} \frac{\text{bar}}{100 \text{ strokes}}$
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(W) = EOB CP - FCP = - = bar	$\frac{(W) \times 100}{(N1+N2+N3)} = \frac{\text{.....} \times 100}{\text{.....}} = \text{.....} \frac{\text{bar}}{100 \text{ strokes}}$
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