International Well Control Forum

Subsea BOP Kill Sheet - Deviated Well (S.I. Units)

DATE : _____

NAME : _____

FORMATION STRENGTH DATA:

SURFACE LEAK -OFF PRESSURE FROM FORMATION STRENGTH TEST (A) ____ kPa

DRILLING FLUID DENS. AT TEST (B) ____ kg/m3

MAX. ALLOWABLE DRILLING FLUID DENSITY =

(B) + (A) x 102 / SHOE T.V. DEPTH = (C) ____ kg/m3

INITIAL MAASP =

((C) - CURR. DENS.) x SHOE T.V. DEPTH / 102 = ____ kPa

CURRENT DRILLING FLUID:

DENSITY ____ kg/m3

SUBSEA BOP DATA:

MARINE RISER LENGTH ____ m

CHOKELINE LENGTH ____ 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 ____ mm

M. DEPTH ____ m

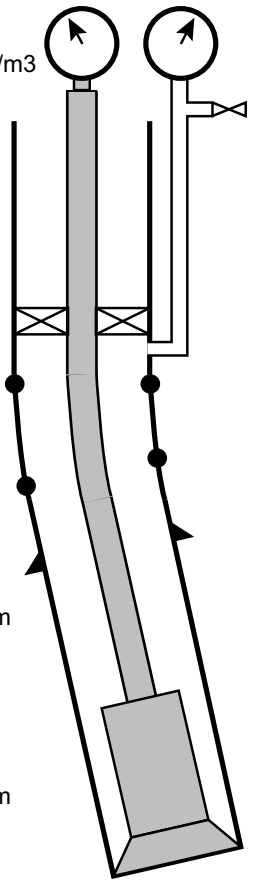
T.V. DEPTH ____ m

HOLE DATA:

SIZE ____ mm

M. DEPTH ____ m

T.V. DEPTH ____ m



PUMP NO. 1 DISPL.	PUMP NO. 2 DISPL.
m3 / stroke	m3 / stroke

SLOW PUMP RATE DATA:	(PL) DYNAMIC PRESSURE LOSS [kPa]					
	PUMP NO. 1			PUMP NO. 2		
	Riser	Choke Line	Friction Choke Line	Riser	Choke Line	Friction Choke Line
SPM						
SPM						

PRE-RECORDED VOLUME DATA:	LENGTH m	CAPACITY m3 / m	VOLUME m3	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)	m3	stks	min
DC x OPEN HOLE	x	=			
DP / HWDP x OPEN HOLE	x	=	+		
OPEN HOLE VOLUME		(F)	m3	stks	min
DP x CASING	x	= (G)	+	stks	min
CHOKELINE	x	= (H)	+	stks	min
TOTAL ANNULUS/CHOKELINE VOLUME		(F+G+H) = (I)	m3	stks	min
TOTAL WELL SYSTEM VOLUME		(D+I) = (J)	m3	stks	min
ACTIVE SURFACE VOLUME		(K)	m3	stks	
TOTAL ACTIVE FLUID SYSTEM		(J+K)	m3	stks	
MARINE RISER x DP	x	=	m3	stks	

International Well Control Forum

Subsea BOP Kill Sheet - Deviated Well (S.I. Units)

DATE : _____

NAME : _____

KICK DATA : SIDPP [ ] kPa SICP [ ] kPa PIT GAIN [ ] m3

KILL FLUID DENSITY KMD	CURRENT DRILLING FLUID DENSITY + $\frac{102 \times SIDPP}{TVD}$ ..... + $\frac{102 \times .....}{.....}$ = ... kg/m3
INITIAL CIRC. PRESS. ICP	DYNAMIC PRESSURE LOSS + SIDPP ..... + ... = ... kPa
INITIAL DYNAMIC CASING PRESS AT KILL PUMP RATE	SICP - CHOKE LINE FRICTION = ... - ..... = ... kPa
FINAL CIRCULATING PRESSURE FCP	$\frac{\text{KILL FLUID DENSITY}}{\text{CURRENT DRILLING FLUID DENSITY}}$ x DYNAMIC PRESSURE LOSS $\frac{.....}{.....}$ x ..... = ... kPa
DYNAMIC PRESSURE LOSS AT KOP (O)	$PL + \left[(FCP-PL) \times \frac{KOPMD}{TDMD}\right]$ = ... + $\left[(.....-.....) \times \frac{.....}{.....}\right]$ = ... kPa
REMAINING SIDPP AT KOP (P)	$SIDPP - \left[\frac{(KMD - OMD) \times KOPTVD}{102}\right]$ = ... - $\left[\frac{(.....-.....) \times .....}{102}\right]$ = ... kPa
CIRCULATING PRESS. AT KOP (KOP CP)	(O) + (P) = ... + ... = ... kPa
DYNAMIC PRESS. LOSS AT EOB (R)	$PL + \left[(FCP-PL) \times \frac{EOBMD}{TDMD}\right]$ = ... + $\left[(.....-.....) \times \frac{.....}{.....}\right]$ = ... kPa
REMAINING SIDPP AT EOB (S)	$SIDPP - \left[\frac{(KMD - OMD) \times EOBTVD}{102}\right]$ = ... - $\left[\frac{(.....-.....) \times .....}{102}\right]$ = ... kPa
CIRCULATING PRESS. AT EOB (EOB CP)	(R) + (S) = ... + ... = ... kPa

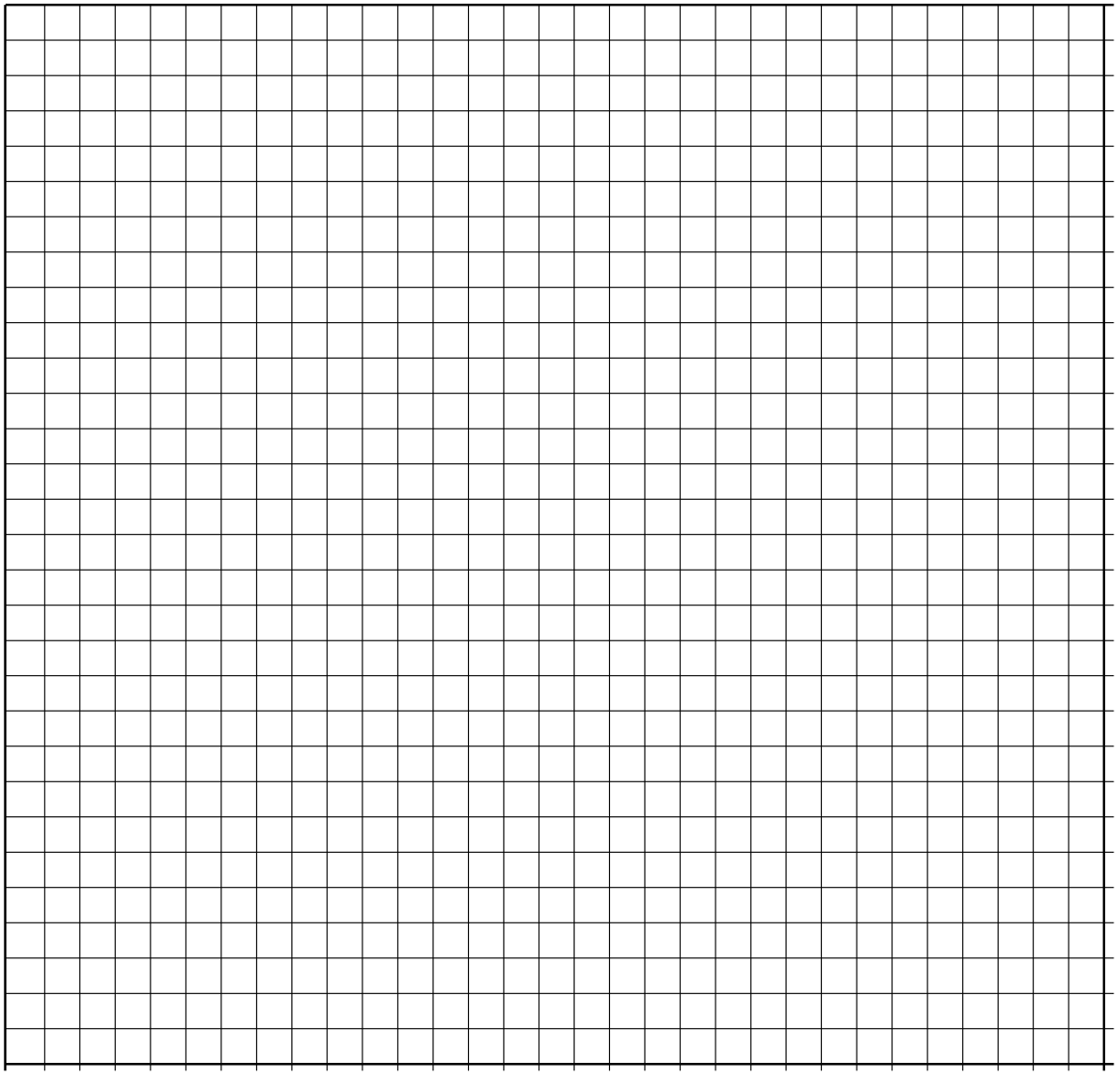
(T) = ICP - KOP CP = ... - ..... = ... kPa	$\frac{(T) \times 100}{(L)} = \frac{..... \times 100}{.....} = ...$ $\frac{kPa}{100 \text{ strokes}}$
(U) = KOP CP - EOB CP = ... - ..... = ... kPa	$\frac{(U) \times 100}{(M)} = \frac{..... \times 100}{.....} = ...$ $\frac{kPa}{100 \text{ strokes}}$
(W) = EOB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

International Well Control Forum

Subsea BOP Kill Sheet - Deviated Well (S.I. Units)

DATE : _____

NAME : _____



STROKES	PRESSURE [kPa]