# International Well Control Forum

## Surface 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) / (SHOE T.V. DEPTH x 0.00981) = **(C)** kg/m3

INITIAL MAASP =

((C) - CURR. DENS.) x 0.00981 x SHOE T.V. DEPTH

= _____ kPa

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

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

CURRENT WELL DATA:

DRILLING FLUID DATA:

DENSITY _____ kg/m3

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

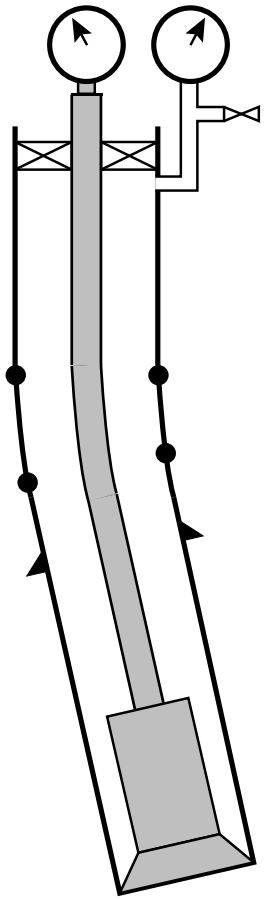
T.V. DEPTH _____ m

HOLE DATA:

SIZE _____ mm

M. DEPTH _____ m

T.V. DEPTH _____ m



| 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 |
| TOTAL ANNULUS VOLUME | | | (F+G) = (H) m3 | stks | min |
| TOTAL WELL SYSTEM VOLUME | | | (D+H) = (I) m3 | stks | min |
| ACTIVE SURFACE VOLUME | | | (J) m3 | | |
| TOTAL ACTIVE FLUID SYSTEM | | | (I+J) m3 | | |

Dr No SD 03/01
(S.I.-0.00981)
29-01-2003

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KICK DATA :

SIDPP [ ] kPa  SICP [ ] kPa  PIT GAIN [ ] m3

**KILL FLUID DENSITY**

KMD

CURRENT DRILLING FLUID DENSITY + $\frac{\text{SIDPP}}{\text{TVD x 0.00981}}$

..... + $\frac{\text{.....}}{\text{..... X0.00981}}$ = ..... kg / m3

**INITIAL CIRC. PRESS.**

ICP

DYNAMIC PRESSURE LOSS + SIDPP

..... + ..... = ..... kPa

**FINAL CIRCULATING PRESSURE**

FCP

$\frac{\text{KILL FLUID DENSITY}}{\text{CURRENT DRILLING FLUID DENSITY}}$ x DYNAMIC PRESSURE LOSS

$\frac{\text{.....}}{\text{.....}}$ x ..... = ..... kPa

**DYNAMIC PRESSURE LOSS AT KOP (O)**

PL + [ (FCP-PL) x $\frac{\text{KOPMD}}{\text{TDMD}}$ ] = ..... + [ (.....-.....) x $\frac{\text{.....}}{\text{.....}}$ ] = ..... kPa

**REMAINING SIDPP AT KOP (P)**

SIDPP - [ (KMD - OMD) x KOPTVD x 0.00981 ]

= ..... - [ (.....-.....) x ..... X 0.00981 ] = ..... kPa

**CIRCULATING PRESS. AT KOP (KOP CP)**

(O) + (P) = ..... + ..... = ..... kPa

**DYNAMIC PRESS. LOSS AT EOB (R)**

PL + [ (FCP-PL) x $\frac{\text{EOBMD}}{\text{TDMD}}$ ] = ..... + [ (.....-.....) x $\frac{\text{.....}}{\text{.....}}$ ] = ..... kPa

**REMAINING SIDPP AT EOB (S)**

SIDPP - [ (KMD - OMD) x EOBTVD x 0.00981 ]

= ..... - [ (.....-.....) x ..... X 0.00981 ] = ..... kPa

**CIRCULATING PRESS. AT EOB (EOB CP)**

(R) + (S) = ..... + ..... = ..... kPa

(T) = ICP - KOP CP = ..... - ..... = ..... kPa

$\frac{\text{(T) x 100}}{\text{(L)}}$ = $\frac{\text{..... x 100}}{\text{.....}}$ = ..... $\frac{\text{kPa}}{\text{100 strokes}}$

(U) = KOP CP - EOB CP = ..... - ..... = ..... kPa

$\frac{\text{(U) x 100}}{\text{(M)}}$ = $\frac{\text{..... x 100}}{\text{.....}}$ = ..... $\frac{\text{kPa}}{\text{100 strokes}}$

(W) = EOB CP - FCP = ..... - ..... = ..... kPa

$\frac{\text{(W) x 100}}{\text{(N1+N2+N3)}}$ = $\frac{\text{..... x 100}}{\text{.....}}$ = ..... $\frac{\text{kPa}}{\text{100 strokes}}$

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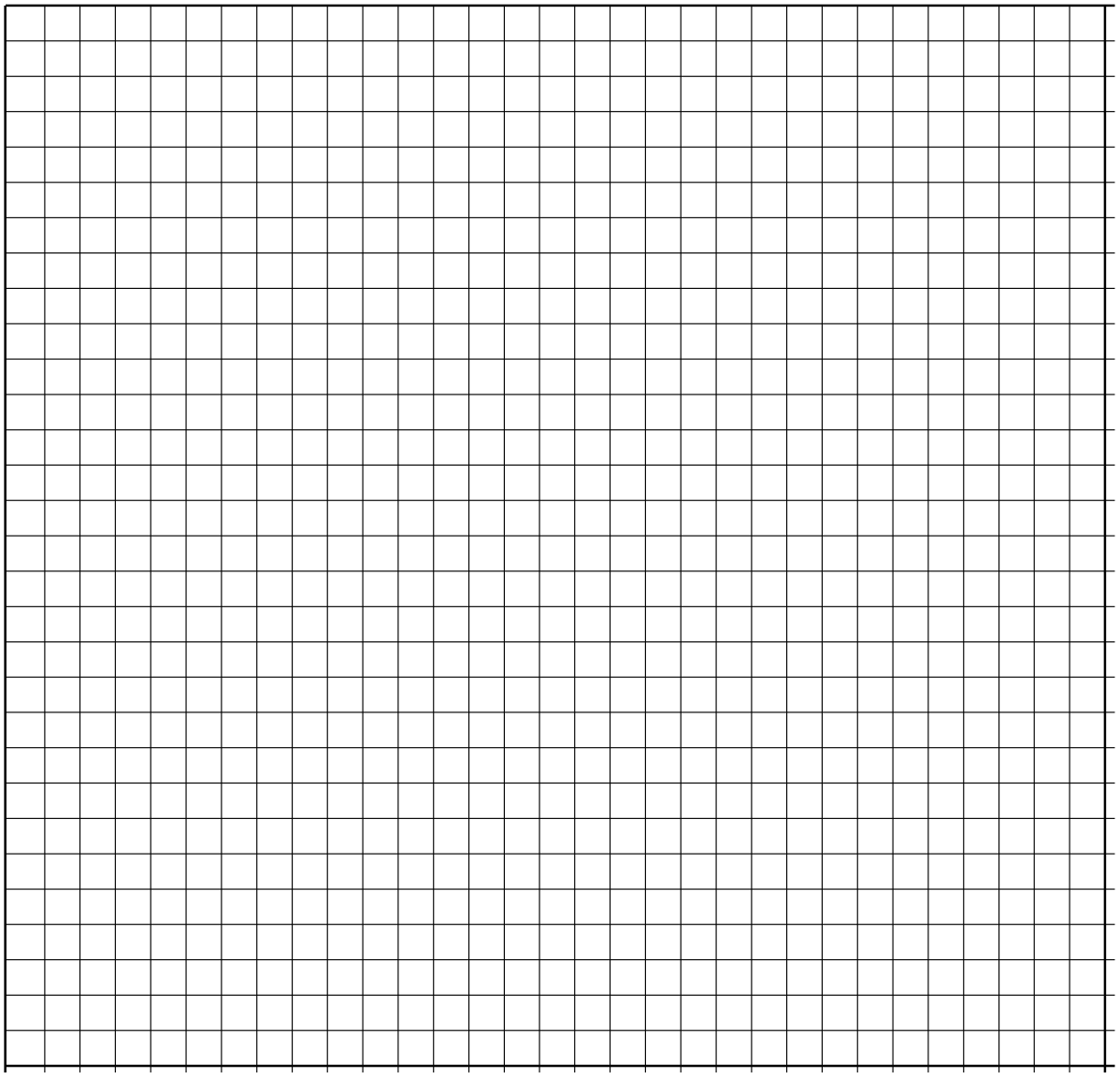
STATIC & DYNAMIC DRILL PIPE PRESSURE [kPa] ⟶



STROKES ⟶

| PRESSURE [kPa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STROKES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |