WELL CONTROL PRE-KICK SHEET (SUBSEA ONLY)

Name:…… Date:…… Level:……

(All depths measured from RKB)

Measured Depth:……7060……ft. True Vertical Depth:……7060 ft.

Measured Depth to Casing Shoe:……ft. Casing Shoe TVD:……ft.

Water Depth:……...ft. Air Gap:…… .ft.

CAPACITIES AND VOLUMES

DRILL STRING DATA	O.D. (in)	I.D. (in)	Wt. (lb/ft)	CAPACITY (bbl/ft)	x LENGTH (ft)	= VOLUME (bbls)
DRILL PIPE						
HWDP						
DRILL COLLARS						

CHECK THAT TOTAL LENGTH = MEASURED DEPTH

Total Length (ft)	Total Drillstring (bbls)

ANNULUS DATA	CAPACITY (bbl/ft)	x LENGTH (ft)	= VOLUME (bbls)
CHOKE LINE			
DP/HWDP IN CASING			
DP/HWDP IN OPEN HOLE			
COLLARS IN OPEN HOLE			

Bit to Shoe Volume (bbls)

Note: Total Length may not equal Measured Depth if choke line is longer than the riser.

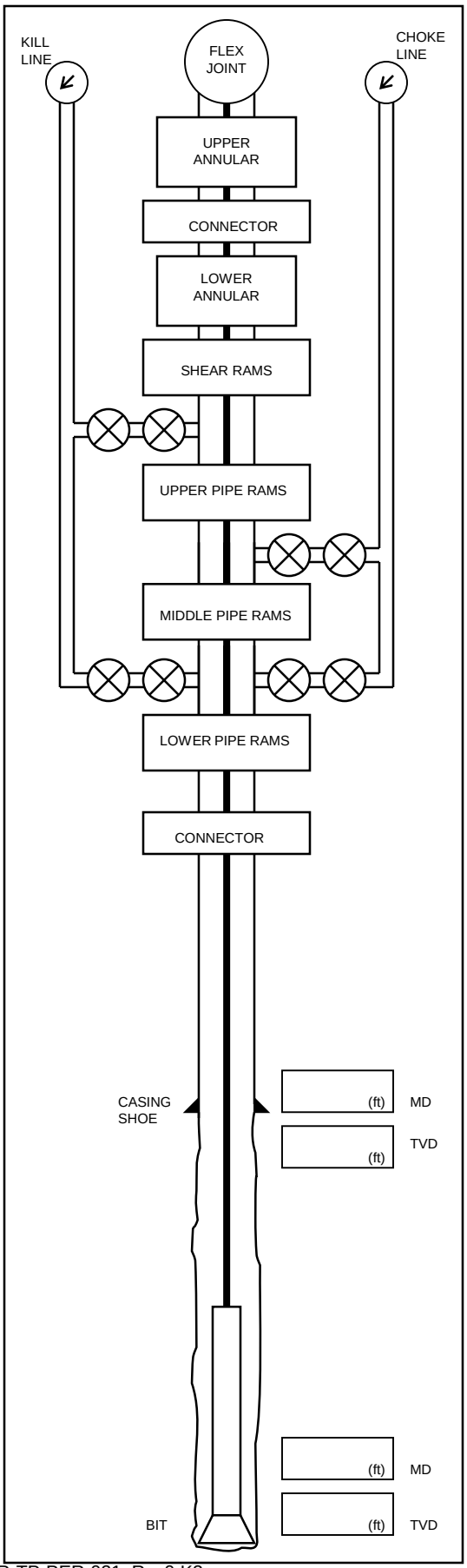
Total Length (ft)	Total Annulus (bbls)

TOTAL SYSTEM VOLUME

TOTAL DRILLSTRING (SURFACE TO BIT) (bbls)	+	TOTAL ANNULUS (BIT TO SURFACE) (bbls)	=	**TOTAL SYSTEM VOLUME** (bbls)

RISER DATA	CAPACITY (DP/RISER) (bbl/ft)	x LENGTH (ft)	= VOLUME (bbls)
DP/RISER ANNULUS VOLUME			

WELL CONTROL PRE-KICK SHEET (SUBSEA ONLY)



Read and record SLOW CIRCULATING RATES

Pump No.	Pump Output	Current Mud Weight
	(bbls/stk)	(ppg)

S.C.R	CHOKE LINE		RISER		CHOKE LINE FRICTION
….. spm	(psi)	-	(psi)	=	(psi)
….. spm	(psi)	-	(psi)	=	(psi)
….. spm	(psi)	-	(psi)	=	(psi)

Drill String Data

Drill String Volume (bbls)		Pump Output (bbls/stk)		Surface to Bit Strokes
	÷		=	

Surface to Bit Strokes		Slow Circulating Rate (spm)		Surface to Bit Time
	÷		=	(min)

Open Hole Data

Bit to Shoe Volume (bbls)		Pump Output (bbls/stk)		Bit to Shoe Strokes
	÷		=	

Bit to Shoe Strokes		Slow Circulating Rate (spm)		Bit to Shoe Time
	÷		=	(min)

Annulus Data

Bit to Surface Volume (bbls)		Pump Output (bbls/stk)		Bit to Surface Strokes
	÷		=	

Bit to Surface Strokes		Slow Circulating Rate (spm)		Bit to Surface Time
	÷		=	(min)

Riser Data

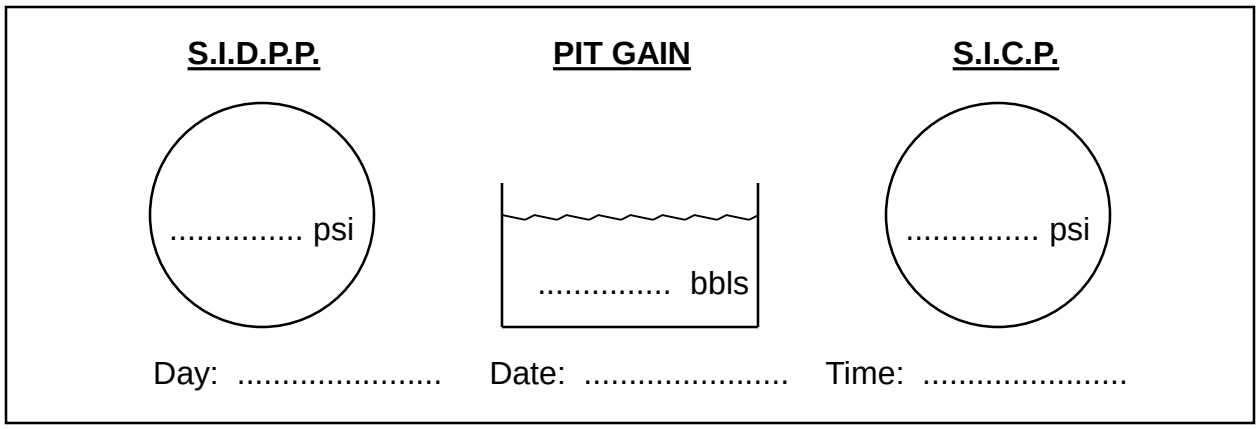
DP/Riser Volume (bbls)		Pump Output (bbls/stk)		BOP to Surface Strokes
	÷		=	

BOP to Surface Strokes		Slow Circulating Rate (spm)		BOP to Surface Time
	÷		=	(min)

WELL CONTROL KICK SHEET (SUBSEA ONLY)

Name: ……

Read and record SIDPP, SICP and PIT GAIN



Max. Mud Wt.

(Surface Leak Off Test ÷ Casing T.V.D. from RKB ÷ 0.052) + Leak Off Test Mud Weight = **Maximum Mud Weight**

(psi) (ft) (ppg) (ppg)

OR

Formation Breakdown Gradient ÷ 0.052 = **Maximum Mud Weight**

(psi/ft) (ppg)

M.A.A.S.P.

(Maximum Mud Weight - Drilling Mud Weight) X 0.052 X Casing T.V.D. from RKB = **Maximum Allowable Annulus Surface Pressure**

(ppg) (ppg) (ft) (psi)

M.A.C.P.

Casing Burst

Casing Yield X Safety Factor = **Maximum Allowable Casing Pressure**

0.8

(psi)

Kill Mud Wt.

(S.I.D.P.P. ÷ T.V.D. from RKB ÷ 0.052) + Drilling Mud Weight = **Kill Mud Weight**

(psi) (ft) (ppg) (ppg)

NEW M.A.A.S.P.

(Maximum Mud Weight - Kill Mud Weight) X 0.052 X Casing T.V.D. from RKB = **New Maximum Allowable Annulus Surface Pressure**

(ppg) (ppg) (ft) (psi)

WELL CONTROL KICK SHEET (SUBSEA ONLY)

Pressure Step Down Chart

1) Calculate I.C.P. **2)** Calculate F.C. P. **3)** Calculate Step-down.
4) In the left column record strokes in 100 stroke intervals, until final circulating pressure is reached
5) Record I.C.P. in top right column, and deduct the pressure step down ΔP until F.C.P. is reached
6) Calculate adjusted choke line friction (using Kill Mud).
7) Calculate complete circulation, in strokes and time

ΔP x 100

_____ (psi/100 stks)

Strokes to Bit	Minimum D.P psi	Including Safety
0	ICP = ______	______

I.C.P.

SCR Riser (psi) + SIDPP (psi) = **Initial Circulating Pressure** (psi)

F.C.P.

SCR Riser (psi) X [Kill Mud (ppg) ÷ Drilling Mud (ppg)] = **Final Circulating Pressure** (psi)

ΔP

[ICP (psi) - FCP - (psi)] ÷ Surface to Bit strokes (stks)- = **Pressure Step-down** (psi/stk)

I.D.C.P.

SICP (psi) - Choke Line Friction (psi) = **Initial Dynamic Casing Pressure** (psi)

Adjusted Choke Line Friction

Choke Line Friction (psi) X [Kill Mud (ppg) ÷ Drilling Mud (ppg)] = **Adjusted Choke Line Friction** (psi)

Complete Circulation Data

Surface to Bit Strokes + Bit to Surface strokes = **Total Strokes to Kill Well**

Surface to Bit Time (min) + Bit to Surface Time (min) = **Total Time to Kill Well** (min)

Riser Data

DP/Riser Volume (bbl) ÷ Pump Output (bbl/stk) = **Riser Strokes**

Riser strokes ÷ Slow Circulating Rate (spm) = **Time to Displace Riser** (min)