RANDY SMITH TRAINING SCHOOLS

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WELL CONTROL KILL SHEET

(A) WELL INFO:

Original Mud Weight ____ ppg

Total Vertical Depth (TVD) ____ ft

Slow Pump Pressure ____ psi

Slow Pump Speed ____ spm

Surface to Bit Strokes ____ stks

(B) KICK DATA:

Shut-In Drillpipe Pressure (SIDP) ____ psi

Shut-In Casing Pressure (SICP) ____ psi

Pit Gain ____ bbls

(C) CALCULATIONS:

Kill Weight Mud (KWM) ____ ppg

KWM = (SIDP ÷ TVD ÷ .052) + Original Mud Weight

KWM = (_____ ÷ _____ ÷ .052) + _____

Initial Circulation Pressure (ICP) ____ psi

ICP = Slow Pump Pressure + SIDP

ICP = _____ + _____

Final Circulating Pressure (FCP) ____ psi

FCP = Slow Pump Pressure X KWM ÷ OMW

FCP = _____ X _____ ÷ _____

(D) WAIT & WEIGHT PROCEDURE

1. Raise mud weight in suction pit to Kill Weight Mud Value
2. Monitor Shut-in Pressures for possible Gas Migration. Maintain drillpipe pressure constant at original Shut-in Value if necessary.
3. When KWM is ready, bring pump on line according to Pump Start Up Procedure.
4. Maintain constant pump speed during kill and adjust choke as needed to control drillpipe pressure as shown in Schedule.
5. Follow Drillpipe Pressure Circulating Schedule until Kill Weight Mud returns to surface.

(E) DRILLPIPE PRESSURE CIRCULATING SCHEDULE

STROKES	PRESSURE	
0		◀ ICP
(1)		
(2)		
(3)		
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
(10)		◀ FCP

Stks to Bit ▶ (10)

INSTRUCTIONS:

Write in ICP, FCP, and Stks to Bit in spaces indicated by schedule.

1. Calculate Strokes per Increment:

Stks to Bit ÷ 10 = _____ Stks

Add these stks to each increment until Stks to Bit is reached.

2. Calculate DP pressure reduction per Increment

(ICP - FCP) ÷ 10 = _____ psi

From ICP subtract this pressure reduction from each increment until FCP is reached.

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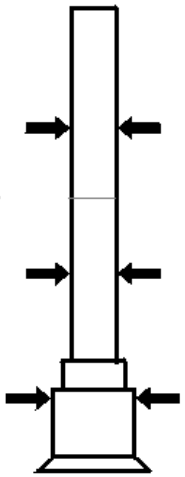
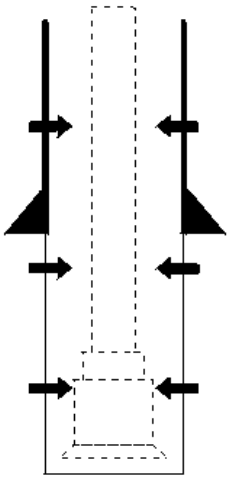
PRE-RECORDED DRILLSTRING INFO



LENGTHS (FT)	CAPACITIES (BBLS/FT)
Drillpipe	
Drillpipe #2 or Heavyweight	
Collars	

PRE-RECORDED ANNULUS INFO



LENGTHS (FT)	CAPACITIES (BBLS/FT)
DP X Casing	
DP X OH	
Collars x OH	

DRILLSTRING VOLUME (BBLS)

Length (ft) x Capacity (bbl/ft) = Vol. (bbls)

(1) _____ X _____ = _____

(2) _____ X _____ = _____

(3) _____ X _____ = _____

(4) _____ X _____ = _____

Add 1+2+3+4 for Total Drillstring Volume = _____

ANNULAR VOLUME (BBLS)

Length (ft) x Capacity (bbl/ft) = Vol. (bbls)

(1) Casing by Drillstring

_____ X _____ = _____

_____ X _____ = _____

_____ X _____ = _____

_____ X _____ = _____

(2) Open Hole by Drillstring

_____ X _____ = _____

_____ X _____ = _____

_____ X _____ = _____

_____ X _____ = _____

(3) Choke Line Volume (subsea only)

_____ X _____ = _____

Add 1 + 2 + 3 for Total Annular Volume = _____

PUMP OUTPUT AND TOTAL STROKES TO KILL WELL

Pump Output (bbls/stk) = _____

(1) Surface to bit strokes: _____ (Drillstring volume) ÷ _____ (Pump Output) = _____ (Drillstring Strokes)

(2) Bottoms Up Strokes: _____ (Annular volume) ÷ _____ (Pump Output) = _____ (Annulus Strokes)

Add 1 + 2 for Total Circulation for Well Kill = _____ Total Strokes

PUMP START-UP PROCEDURES

SURFACE STACKS:

(1) As Driller brings pump on line; adjust choke as necessary to maintain casing pressure constant at SICP value until kill speed is reached.

(2) Driller should take at least a full minute to bring pump up to kill speed.

(3) When pressure gages stabilize, read correct ICP from drillpipe gage, If necessary, correct Drillpipe Pressure Circulating Schedule.

SUBSEA STACKS:

CHOKE LINE FRICTION = _____ psi

(1) As Driller brings pump on line; adjust choke as necessary to maintain kill line pressure constant at shut-in value until kill speed is reached.

If kill line pressure not available, reduce casing pressure by the choke line friction as the pump is coming up to kill speed.

(2) Continue with steps (2) & (3) above.