

**International Well Control Forum  
Subsea BOP vertical well kill sheet  
(API field units)**

Date: \_\_\_\_\_

Name: \_\_\_\_\_

**Formation strength data:**

Surface leak-off pressure from formation strength test  **psi**

Fluid density at test  **ppg**

**Maximum allowable fluid density =**

$(B) + \left( \frac{(A)}{\text{casing shoe TVD} \times 0.052} \right) =$   **ppg**

**Initial MAASP =**

$((C) - \text{current fluid density}) \times 0.052 \times \text{casing shoe TVD}$   
=  **psi**

**Current well data:**

**Subsea BOP data:**

Marine riser length  **ft**

Choke line length  **ft**

**Current fluid:**

Density  **ppg**

**Casing shoe data:**

Size  **in**

MD  **ft**

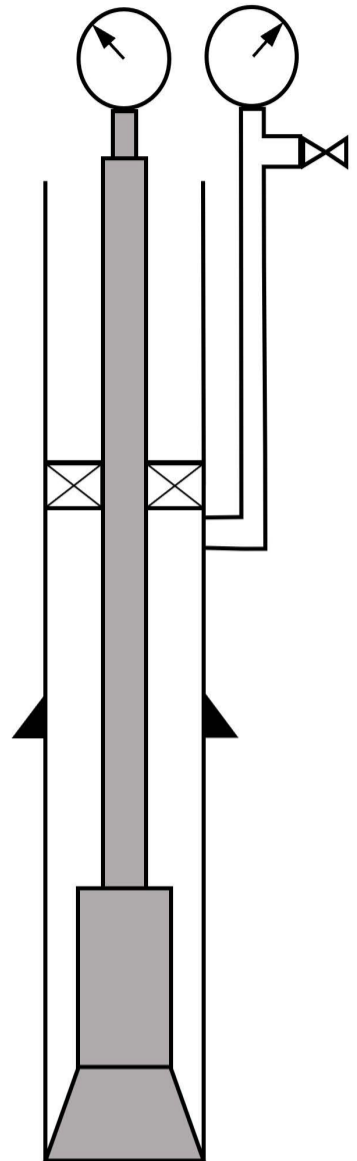
TVD  **ft**

**Openhole data:**

Size  **in**

MD  **ft**

TVD  **ft**



|                            |                            |
|----------------------------|----------------------------|
| <b>Pump 1 displacement</b> | <b>Pump 2 displacement</b> |
| <b>bbl/stroke</b>          | <b>bbl/stroke</b>          |

| Circulating pressure at kill rate (SCR) |        |            |                     |        |            |                     |
|---|--------|------------|---------------------|--------|------------|---------------------|
| Kill rate data:                         | Pump 1 |            |                     | Pump 2 |            |                     |
|   | Riser  | Choke line | Choke line friction | Riser  | Choke line | Choke line friction |
| <b>SPM</b>                              |        |            |                     |        |            |                     |
| <b>SPM</b>                              |        |            |                     |        |            |                     |

|                             |            |            |                |
|-----------------------------|------------|------------|----------------|
| <b>Surface lines volume</b> | <b>(D)</b> | <b>bbl</b> | <b>strokes</b> |
|-----------------------------|------------|------------|----------------|

| Pre-recorded volume data             | Length ft | Capacity bbl/ft | Volume bbl | Pump strokes                        | Time minutes                      |
|--------------------------------------|-----------|-----------------|------------|-------------------------------------|-----------------------------------|
| <b>Drillpipe (DP)</b>                | <b>x</b>  | <b>=</b>        |            | <b>volume<br/>pump displacement</b> | <b>pump strokes<br/>kill rate</b> |
| <b>Heavy weight drillpipe (HWDP)</b> | <b>x</b>  | <b>=</b>        | <b>+</b>   |                                     |                                   |
| <b>Drill collars (DC)</b>            | <b>x</b>  | <b>=</b>        | <b>+</b>   |                                     |                                   |

|                           |            |            |            |                |            |
|---------------------------|------------|------------|------------|----------------|------------|
| <b>Drillstring volume</b> | <b>(E)</b> | <b>bbl</b> | <b>(F)</b> | <b>strokes</b> | <b>min</b> |
|---------------------------|------------|------------|------------|----------------|------------|

|                           |          |          |          |  |  |
|---------------------------|----------|----------|----------|--|--|
| <b>DC x openhole</b>      | <b>x</b> | <b>=</b> |          |  |  |
| <b>DP/HWDP x openhole</b> | <b>x</b> | <b>=</b> | <b>+</b> |  |  |

|                        |            |            |          |                |                |
|------------------------|------------|------------|----------|----------------|----------------|
| <b>Openhole volume</b> | <b>(G)</b> | <b>bbl</b> |          | <b>strokes</b> | <b>min</b>     |
| <b>DP x casing</b>     | <b>(H)</b> | <b>x</b>   | <b>=</b> | <b>+</b>       | <b>strokes</b> |
| <b>Choke line</b>      | <b>(I)</b> | <b>x</b>   | <b>=</b> | <b>+</b>       | <b>strokes</b> |

|  |                        |            |  |                |            |
|--|------------------------|------------|--|----------------|------------|
| <b>Total annulus/choke line volume</b> | <b>(G)+(H)+(I)=(J)</b> | <b>bbl</b> |  | <b>strokes</b> | <b>min</b> |
|--|------------------------|------------|--|----------------|------------|

|                                 |                    |            |  |                |            |
|---------------------------------|--------------------|------------|--|----------------|------------|
| <b>Total well system volume</b> | <b>(E)+(J)=(K)</b> | <b>bbl</b> |  | <b>strokes</b> | <b>min</b> |
|---------------------------------|--------------------|------------|--|----------------|------------|

|                                  |            |            |  |                |  |
|----------------------------------|------------|------------|--|----------------|--|
| <b>Active surface pit volume</b> | <b>(L)</b> | <b>bbl</b> |  | <b>strokes</b> |  |
|----------------------------------|------------|------------|--|----------------|--|

|                                  |                    |            |  |                |  |
|----------------------------------|--------------------|------------|--|----------------|--|
| <b>Total active fluid volume</b> | <b>(D)+(K)+(L)</b> | <b>bbl</b> |  | <b>strokes</b> |  |
|----------------------------------|--------------------|------------|--|----------------|--|

|                          |          |          |            |                |            |
|--------------------------|----------|----------|------------|----------------|------------|
| <b>Marine riser x DP</b> | <b>x</b> | <b>=</b> | <b>bbl</b> | <b>strokes</b> | <b>min</b> |
|--------------------------|----------|----------|------------|----------------|------------|

