

Well Intervention Pressure Control

Abbreviations used in this document

kPa	=	KiloPascal (pressure)	
kPa/m	=	KiloPascal per metre	
BHP	=	Bottom Hole Pressure	
kg/m³	=	Kilogram per cubic metre	
m³/m	=	Cubic metres per metre	
m³/min	=	Cubic metre per minute	
m ³ /stroke	=	Cubic metre per stroke	
Μ	=	Metre	
MD	=	Measured Depth	
TVD	=	True Vertical Depth	
SIWHP	=	Shut in Well Head Pressure	
0.00981	=	Constant factor	

1. PRESSURE GRADIENT (kPa/m)

Mud Density (kg/m³) x 0.00981

2. FLUID DENSITY (kg/m³)

Pressure (kPa) ÷ TVD (m) ÷ 0.00981

Or

Pressure (kPa) TVD (m) x 0.00981

3. HYDROSTATIC PRESSURE (kPa)

Mud Density (kg/m³) x 0.00981 x TVD (m)

4. FORMATION PRESSURE (kPa)

Hydrostatic Pressure in Drill String (kPa) + SIDPP (kPa)

5. TOTAL PRESSURE AT A GIVEN DEPTH IN A SHUT IN WELLBORE (kPa) (Where BHP = Formation Pressure)

Hydrostatic pressure of Gas (kPa) + Hydrostatic Pressure of Oil (kPa) + SIWHP (kPa)

6. TIME TO PUMP (minutes)

- a. Tubing Tubing Capacity (m³/m) x MD (m) Pump Rate (m³/min)
- b. Annulus

Annulus Capacity (m³/m) x MD (m) Pump Rate (m³/min)

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7. STROKES TO DISPLACE (Strokes)

a Tubina	Tubing Capacity (m ³ /m) x MD (m)	
a. Tubing	Pump Displacement (m ³ /stroke)	
h Annulua	Annulus Capacity (m ³ /m) x MD (m)	
D. Annulus	Pump Displacement (m ³ /stroke)	

Pump Displacement (m³/stroke)

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