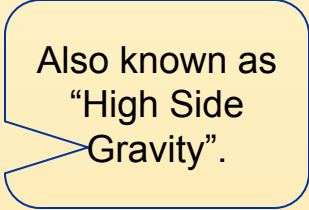


# Toolface

There are two types of toolface in drilling:

- Magnetic Toolface
- Gravity Toolface



Also known as  
“High Side  
Gravity”.

# Magnetic Toolface - What is it?

**Magnetic Toolface** uses the magnetometers to determine which way the bit is pointing in reference to magnetic north.

—0 does not indicate “up”.

# Gravity Toolface - What is it?

**Gravity Toolface** uses the accelerometers to determine the “high side of the hole”.

—0 is “up”

—90 is right

—180 is down

—270 is left

# Toolface Offset

For the PCD, toolface offset is calculated from rig floor offset (RFO) and high side gravity offset (HSG).

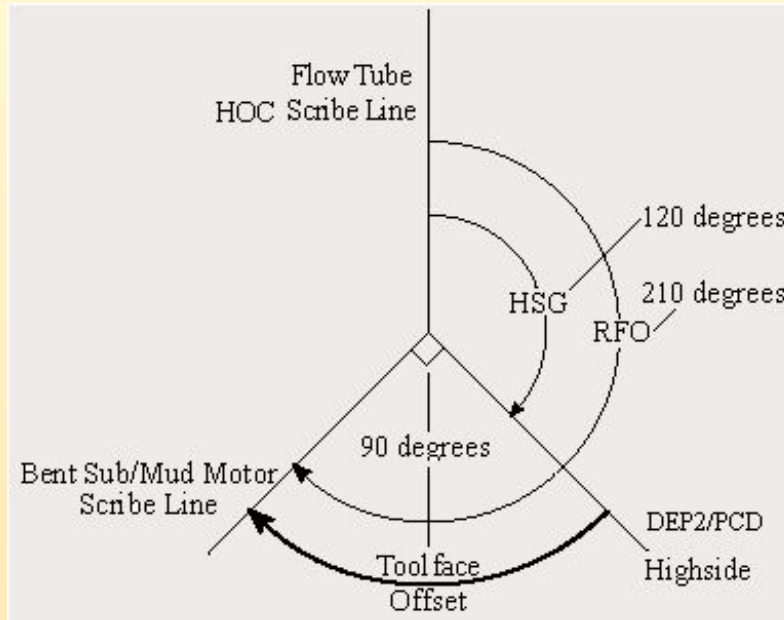
# Rig Floor Offset (RFO)

Rig Floor Offset is the measurement, in degrees, clockwise from the PCD tool scribe line/HOC to the bent sub/mud motor scribe line looking down.

# High Side Gravity Offset (HSG)

High Side Gravity Offset is the measurement, in degrees, clockwise from the flow tube/HOC scribe line to the highside of the PCD.

# Toolface Offset Example



Offset = (360-HSG) + RFO.

Subtract 360 if the result is greater than 360.

$$\begin{array}{r}
 360 \\
 -120 \\
 \hline
 240 \\
 +210 \\
 \hline
 450 \\
 -360 \\
 \hline
 90
 \end{array}$$

Offset is 90.