PFT TRACER PUMP

When core are recovered for microbiological studies, PFT tracers can be added to the mud pump inlets. Two Tracer pumps A and B, are installed and plumbed to the inlets of both Mud pump 1 and 2. Only one Tracer pump is on line at any one time. The Tracer pump can be controlled manually or Rigwatch can control it automatically. On Auto the PFT ratio is maintained at **0.5ppm** volume and controlled by Rigwatch.

Note: Ensure Tracer plumbing to Mud pump inlet connections are filled with PFT tracers.

At 50 STKS/min, drill string fill rate will be ~**10 minutes/1000 meter.**

At 50 Stks/min and a PFT ratio of 0.5ppm volume, PFT flow is 0.55ml/min or 33ml/HR or 60mg/HR

1 X Mud pump stroke = 19.54 liter. Drillstring volume = 9.16 lit/m. PFT Density = 1.76 g/ml

Manual mode:

On the Tracer pump rear panel, remove the RJ-11 data connector and switch power switch to ON. Set the pump ON/OFF and flow rate from the front panel. Configure the system plumbing and valves appropriately.
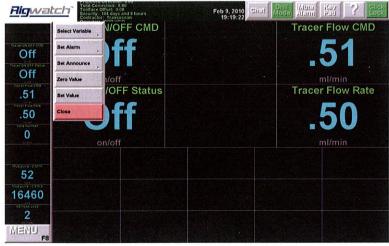
At Mud pump 50 Stks/min and 0.55ml/min tracer flow ,PFT ratio will be 0.5ppm volume.

Auto mode (Rigwatch):

On the Tracer pump rear panel, insert the data control cable into the RJ-11 data connector and switch the power switch to ON.

Configure the system plumbing and valves appropriately.

Select "**Tracer ON/OFF CMD**" variable on "live data" screen.
Select the "**Set Value**" button for ON command.

The "**Tracer ON/OFF CMD**" variable will display **On** and the command will be sent to the Tracer pump.

Within ~10 sec the "**Tracer ON/OFF Status**" variable will change to **On**, confirming the pump is ON.

Switching the pump OFF is the reverse of the sequence above, with the difference of selecting button "**Zero value**" as the switch OFF command.

The Rigwatch calculated flow rate command to the pump is automatic and will be displayed as the "**Tracer Flow CMD**" variable. The actual flow rate setting is echoed from the pump as the "**Tracer Flow Rate**" variable. Although flow rate is always displayed, actual flow only takes place once pump is switched ON.

Rigwatch maintains a PFT/water ratio of **0.5ppm** volume as a function of Mud Pump Strokes per minute. This ratio can be changed within the Rigwatch application by somebody familiar with the system, should the need arise.