

BSW and Gas Sampling Kit



Surface Sampling

When extracted from an oil reservoir, the crude oil will contain some amount of water and suspended solids from the reservoir formation. The BSW and Gas Sampling Kit is designed for easy and fast determination of such impurities in crude oil. The measurement of gas volume is incorporated for determination of the gas/oil ratio (GOR).

Description

The Basic Sediment and Water (BS&W) is a term originally used to refer to the measurement of water and sediment (suspended solids) in crude oil production. Measurement can take place at the wellhead, tank or at custody transfer. Today, the term is also used interchangeably with “water cut” - or the percentage of water in crude oil.

Usually, the BSW and Gas Sampling Kit is run parallel to a well test or production test. The origin of the design of this tool came from the way BS&W sampling was done. The measurement of gas volume has been incorporated as knowing the gas/oil ratios (GOR) of a well test or production test is a control of the efficiency of the flow process or the character of a well. Many times critical information, like the GOR, gets lost due to the well not producing according to the design of the well test or production set up.

Variables negatively influencing GOR are:

- operating procedures
- internal design of well test or production vessels
- instrumentation set up and control
- reporting programs
- competency of the operators

The BSW and Gas Sampling Kit is robust and simple to operate with a high degree of safety on site for the operator. Contrary to normal flashing samples for BS&W, our unique design catches the volatile oils or heavy gases. The liquids are centrifuged and measured in a calibrated glass and the gas is measured through a gas meter. Each cycle takes about 15 minutes.

The applied measuring method has been known to find:

- missing 35% production
- unreported C4 to C10 gases
- GOR on heavy oil fields with nitrogen lift through coil tubing.

Accessories

Auxiliary measuring equipment like the centrifuge, heating jacket (for heavy oil), liquid density meter, a micro gas chromatograph, Karl Fischer water analyzer, salt refractor meter are a good compliment for complete set up, but not a must to use this tool only as a safer BS&W sampler.



Aluminum transport box



GOR in black-oil from samples taken via Leutert Bottomhole Sampler in combination with the BSW&G flasher