ALTACHEM LTD.

OILFIELD & INDUSTRIAL CHEMICALS

Tech Data Sheet ACL-91 (AC-91) SERIES

GAS PLUS – CO2 -SWAB STICK WATER SOLUBLE TUBE (YELLOWISH WHITE)

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Low Foamer in Water Excellent Foamer in Condensate over 65% of The Column

GAS PLUS - SWAB - CO2 GAS STICKS are water-soluble containing a CO2 gas producing agent. These sticks generate a larger amount of gas than the CO2 stick that provides agitation energy to the foaming agent in dead watered-up gas wells.

PRODUCT USES & ADVANTAGES:

GAS PLUS - SWAB - CO2 GAS STICKS are used to produce gas to help dewatering of gas wells. Pre-treat with the recommended type of foam stick is required.

GAS PLUS - SWAB - CO2 GAS STICKS produce larger amount of gas than the CO2 stick which can (in conjunction with the foam sticks used) reduce the hydrostatic back pressure on the formation, allowing the natural gas to flow from the formation and kick off the well.

<u>GAS PLUS - SWAB - CO2 GAS STICKS Some water is necessary for the gas stick to produce CO2 gas.</u>

<u>GAS PLUS - SWAB - CO2 GAS STICKS</u> are very economical when compared to conventional swabbing costs. Gas sticks should be used as a last resort before having to call out a swabbing unit to swab a dead well.

<u>GAS PLUS - SWAB - CO2 GAS STICKS these sticks contain a stronger amount of gas producing agent to help kick off the well.</u>

TREATMENT DETERMINATION & PROCEDURE

The number of sticks is based on the volume of water above the perforations to be agitated. Field tests indicate that the best results were achieved by using a larger *initial slug treatment of 1/2 to 1 percent by weight of gas sticks to the fluid above the perforations. This would require 1.75 lb. to 3.50 lb. of stick per BBL of water to be agitated. Often agitating the top one-half portion of the water column may decrease the hydrostatic back pressure which increases the gas production further enhancing the foaming action to create enough gas and foam to kick-off the well.*

PART NUMBER	STICK SIZES	STICK RATIO INITIAL SLUG TREATMENT
ACL-9120	3/4 X 15	4 TO 8 STICKS PER 1 BBL's OF Total Fluid
ACL-9140	1 1 /4 X 12	2 TO 3 STICKS PER 1 BBL's OF Total Fluid
ACL-9150	1 1/4 X 15	1 TO 2 STICKS PER 1 BBL's OF Total Fluid

PRODUCT SPECIFICATIONS:

Temperature in degrees Fahrenheit / Stick sizes in inches. This stick will <u>dissolve in about 5 to 15 minutes</u> <u>depending on temperature, salt content, and relative water motion.</u> These sticks are 100% soluble in water and insoluble in oil. The soluble tube will melt at 130 degrees. <u>The stick will dissolve in water in wells with</u> <u>BHT below 130 degrees but at a slower rate. The specific gravity is 1.35. The falling velocity through fresh</u> water is approximately 100 feet per minute.

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THE MOST COMMON PROCEDURE:

<u>Is to shut-in the well and drop sticks through a lubricator.</u> <u>return well to normal production. For high rate wells flow well at about 25 percent of pre treatment rate for</u> <u>30 minutes or until foam reaches surface then return to normal production. For shallow or low rate wells</u> <u>leave well flowing while dropping sticks.</u>

HEALTH AND SAFETY:

Gas produced is CO2. Quantity of gas produced is relatitivley small. Handle with caution

FOR INDUSTRIAL USE ONLY:

CAUTION: As with all industrial chemicals, contact with eyes or skin should be avoided. Wash thoroughly with water. Pellets should be stored in a cool dry place. Always remove pellets from the container with the scoop provided while wearing rubber gloves to avoid skin contact. Goggles are advised.

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