

RADIOACTIVE MARKER SUB

APPLICATION

The radioactive sub is designed to accommodate a 1 micro Curie Cobalt 60 "pip-tag" in the top shoulder, secured in place by a screw. The pip-tag will give off a signal which can be detected by a through tubing gamma ray correlation device. Comparison of the log obtained through tubing with the base log for perforating will enable the completion string to be accurately positioned prior to firing the guns.

OPERATION

The distance from the top shot to the pip-tag must be accurately determined. The sub should be run above the packer, preferably at least 1 joint of tubing away to ensure the correlation tool does not pass through the packer and risk actuating break-plug type tools. A single pip-tag is sufficient for use in the sub. A Cobalt 60 pip tag has a half life of 5.2 years and a radiation level of 0.014 mrem/hr at 1 foot (in air). If the string is pulled, the pip tag should be retrieved and a proper inventory kept.

ASSEMBLY

To avoid confusion with other subs, the radioactive marker sub should be painted yellow. Subs can be made with a variety of threads to suit completion requirements; ratings will be the same as for the sub thread connection, 3 or 4 screw holes are normally provided on the sub.

