

Brian Collins
OIL CONSERVATION DIVISION**INJECTION WELL MONITORING GUIDANCE**

(Revised 10/6/95)

INJECTION PROFILES

- 1) All injections profiles shall be a combination of temperature and radioactive tracer logs. The injection profiles will always be witnessed by a representative of the Division.
- 2) All log curves shall be started (or finished) at a minimum of 200 feet above the top perforation. Temperatures curves shall be run: a) while injecting, and, if the well is on vacuum or goes on vacuum within 30 minutes of shutting in the well at the conclusion of the tracer studies; b) 30 minutes after shut-in, c) 1 hour after shut-in, and d) 2 hours after shut-in. If the well is holding surface pressure at the conclusion of the tracer studies, shut-in temperature curves will be run: b) 1 hour after shut-in, c) 2 hours after shut-in, and d) 24 hours after shut-in.
- 3) Radioactive tracer runs shall start at a minimum of 150 feet above the top perforation and consist primarily of an "intensity" type survey. The initial recorded runs through the radioactive material should have a minimum of 6 inches chart deflection immediately above any anticipated loss interval. The tracer intensity shall be recorded until the R/A residual falls below 1 chart division deflection over background.
- 4) The "velocity" type and "drop shot" type surveys are not required but may be run at the discretion of the operator of the well.
- 5) A "no flow" interval should be established immediately below the bottom perforation or, if flow exists, a percentage or rate of movement below the perforated interval should be calculated.
- 6) Channel (leak) checks should be made first at the bottom perforation and finally at the top perforation with the detector tool positioned approximately 10 feet below or above the subject perforations. The R/A "burst" or "slug" should be of very high intensity and recorded on time-drive for a minimum of 5 minutes (unless R/A material is detected rapidly). At the conclusion of the time-drive survey, the logger shall drop below the remaining R/A material and make a number of depth-drive (log through) runs until the existence or severity of any channeling or leak is determined. Every effort should be made to establish the top or bottom of the channel(s) if one exists. If there is a severe channel, this might include "unloading" the R/A ejector tool at the top or bottom perforation in an attempt to saturate the fluid moving in the channel. The logging unit operator should be able to allocate the usage of R/A material so as to leave no doubt about the existence and severity of channels or leaks at these two positions.