



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

November 6, 1996

Mr. John Thompson  
J.K. Edwards Associates, Inc.  
1401 17th Street, Suite 1400  
Denver, Colorado 80202

**RE: Change in Logging Requirements,  
Division Order SWD-583.**

Dear Mr. Thompson,

Reference is made to your recent request to relieve logging requirements as outlined by Division Order SWD-583. Your request was based on the fact that your company recently conducted a cement bond log on the subject well. You further stated in your request that the availability of the proper radioactive isotopes has been severely curtailed in recent years in the San Juan Basin Area. My staff has considered your request and while we feel the cement bond log information is valuable, in and of itself, does not qualify to relieve three years of injection profile information as provided by a combination temperature and radioactive tracer log.

Further, we understand that having radioactive isotopes shipped in would make the tracer studies cost prohibitive. You are therefore authorized to substitute your choice of one of the following log combinations for the logs specified in SWD-583.

- 1) Noise/Temperature Combination (guidelines attached), or,
- 2) Oxygen Activation Log

In either case, the logs will be conducted at one year, two year and three year intervals after implementation of injection operations.

These logging requirements are hereby made a part of Division Order SWD-583. Please inform the Aztec District Office of your decision as to which log type will be utilized.

Sincerely,

William J. LeMay  
Director

WJL/BES

cc: Oil Conservation Division - Aztec  
File: SWD-583

## **OIL CONSERVATION DIVISION**

### **INJECTION WELL MONITORING GUIDANCE**

#### **COMBINATION NOISE / TEMPERATURE**

(Revised 11/1/96)

#### **NOISE / TEMPERATURE LOG**

- 1) Noise / temperature logs 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, and inside the tubing. 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 injecting 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. Noise logs shall be run immediately after the injection temperature and after the first and last shut-in temperatures as determined above.
- 3) Noise depth settings should be pre-determined by:
  - a) Well Geometry - Perforations, Casing Shoes, Liner Tops, Bottom of Tubing, Etc.
  - b) Other anomalies identified by the temperature logs.
  - c) Noise log runs shall start at at the total depth of the well, ideally in a 'no-flow' interval.
  - d) Perforated and blank pipe intervals should be investigated at settings which will yield sufficient resolution to locate vertical extents of possible channels.
- 4) After temperature and noise logs have been compiled and interpreted, a representative of the operating company shall immediately notify the Division if any channeling exists. The logging company should be able to qualify the severity of any channeling. Once channel severity has been ascertained, the Division shall make the determination based on the interpretation, whether or not to immediately shut the well in.
- 5) Copies of all logs shall be forwarded to the District office and the Division office of the Oil Conservation Division. After reviewing the results in the Division office, a final determination shall be made as to how best to bring the well into compliance.