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February 19, 2004



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GUIDELINE MEMORANDUM 2004-1

TO: Well Permitting Staff and Division Offices.

FROM: Hal Simpson, State Engineer *Hal D. Simpson*

SUBJECT: Guidelines to Differentiate Between Well "Repair" and Well "Replacement"

Problem

Recent inquiries regarding the this office's interpretation of well "repair", as opposed to what constitutes well "replacement", have indicated a need to better define the activities associated with the terms. The issue arises from proposals to "repair" wells in the same borehole established for the original well by removing the well casing(s) and gravel pack and reinstalling new casing and gravel pack materials.

Discussion

The statutory definitions (provided below) for repair and replacement do not define mutually exclusive actions and were not intended to address the specific issues of this guideline. A better delineation between the activities is needed to determine when it is necessary to obtain a new permit prior to conducting the work. There is a common perception that a permit to replace a well is required only if the well is relocated, deepened, or enlarged in some manner and that any other activity is considered to be well repair that can be accomplished without obtaining a new well permit. However, this general view of well construction fails to recognize and address the occurrence of reconstructing a well in the original borehole. Such reconstruction is a replacement of the original well.

Guideline

The following criteria are adopted to assist in differentiating between "repair" and "replacement", and to determine when a new permit is needed:

Repair: No new permit needed

- Surface casing and grout are not disturbed, and
- Borehole is not deepened or enlarged, and
- Borehole remains open during extraction and reinstallation of casing, and
- No drilling, jetting, bailing, or other excavation is required to re-establish the borehole, and
- Placement of grout is not needed to maintain compliance with minimum construction standards.

Replacement: New permit required

- Surface casing is replaced and grout is installed, or
- Borehole is deepened or enlarged, or
- Drilling, jetting, bailing, or some other means of excavation is employed to remove gravel pack or collapsed material to re-establish the borehole.

Based on the above criteria, removal and reinstallation of well casing under the auspices of "repair" is physically impossible for wells that are gravel packed, completed into unconsolidated aquifer materials (Type III aquifers), or that penetrate unconsolidated aquifer materials that will collapse into the hole upon extraction of the casing. The necessity of "drilling" to re-establish the borehole constitutes reconstruction of the well and is therefore considered to be a replacement of the original well. Relocation of the well is not a prerequisite for well replacement.

Section 37-91-102, C.R.S.,

(15) "Repair" means any change, replacement, or other alteration of any well or pumping equipment which requires a breaking or opening of the well seal or any waterlines up to and including the pressure tank and any coupling appurtenant thereto.

Section 37-90-103, C.R.S.,

(13) "Replacement well" means a new well which replaces an existing well and which shall be limited to the yield of the original well and shall take the date of priority of the original well, which shall be abandoned upon completion of the new well.