

~~5A-376~~ Offsite

Subject: Preliminary well design for R-16

Date: Fri, 23 Aug 2002 15:12:38 -0600

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Carolyn and John,

Here is a preliminary well design for R-16 in Overlook Park, White Rock. The purpose of this preliminary design is to identify the general approach we are proposing for this well and to facilitate NMED participation in well design decisions in a timely fashion. The well design will be adjusted once the borehole is completed and geophysical logs from Schlumberger, well cuttings, and drillers observations are evaluated.

The borehole is currently at 711 ft depth and the swl for the regional aquifer is expected at ~783 ft depth. Three screens are proposed for the regional aquifer; all three screens will be within Santa Fe Group sediments. A Westbay sampling system will be used to isolate each of the three screen intervals as well as to sample groundwater and measure water pressures. The proposed well design supports the DQOs for this well which are primarily focused on two areas:

- 1) Defining the static water level for the regional aquifer for comparison to nearby springs, the Rio Grande, and the Buckman well field. (Definition of swl will occur as the borehole is advanced into the regional aquifer).
- 2) Determine vertical gradients in the regional aquifer near the Rio Grande.

Screen #1 is located near the top of the aquifer and is the shallow measurement point for vertical gradients. This location is fixed relative to the measured swl.

Screen #2 is located approximately half way between screens #1 and #3 for vertical gradient information. Schlumberger geophysical logs will be used to select a relatively low porosity/low permeability zone so that the lower end of the permeability distributions for the Santa Fe sediments can be targeted for straddle-packer/ injection tests in the completed well.

Screen #3 is located as deep as feasible in the completed borehole for vertical gradient information. Schlumberger geophysical logs will be used to select a relatively high porosity/high permeability zone so that the upper end of the permeability distributions for the Santa Fe sediments can be targeted for straddle-packer/ injection tests in the completed well.

I will be out of town next week and drilling is expected to be concluded by mid-week. Please contact David Vaniman if you have any questions about the proposed completion approach. Dave will provide you with the final design once the borehole is installed and the data evaluation is completed.

Dave



R16
 • no perched water
 9/30 Geophys. logging today - will have well into this afternoon
 1275' TD

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4135

R-16 Preliminary Well Design

Not to Scale

