



Mark Parkinson, Governor
John W. Mitchell, Acting Secretary

DEPARTMENT OF HEALTH
AND ENVIRONMENT

www.kdheks.gov

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Water Well Contractors:

Recently a geothermal closed loop heat pump well was drilled to a depth of 360 foot have encountered flows of saltwater (estimated at 5 gallons per minute) from depths to believed to be from 150-152 feet below ground surface. It is believed the salt water flow came from a Limestone layer that has been fractured. The well was located in the City of Atchison at the Public Library.

This is to inform you of the potential to encounter a pressurized saltwater flow problem whenever you drill test holes, or construct or reconstruct water wells or geothermal closed loop heat pump wells within the area of the City of Atchison, Atchison County, Kansas.

The lithology of the well is as follows:

0-30 silty clay
30-38 silty clay with gravel stringers
38-50 blue clay with mixed sand
50-55 blue clay
55-57 loose gravel with slight water loss
57-65 blue clay mixed sand
65-82 blue shale
82-84 limestone
84-94 shale
94-100 limestone
100-120 shale
120-140 shale
140-150 shale
150-152 limestone- drilled like it was fractured
152-162 shale
162-167 limestone
167-195 shale
195-205 hard limestone
205-232 shale
232-248 limestone
248-258 shale
258-261 limestone

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261-278 shale
278-280 limestone
280-290 shale
290-300 limestone
300-302 shale
302-304 limestone
304-358 shale
358-360 hard limestone- very slow penetration with PDC bit

A map of the area is attached:

<http://www.ksdot.org/burtransplan/maps/county-pdf/atchison.PDF>

The Department appreciates your support and cooperation this matter. Please contact us if you have any questions concerning this matter.

Sincerely,

Richard Harper, L.G.
Unit Chief, Water Well Unit
Bureau of Water

RH:db

R/AtchisonMapandInfo