



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

29-13828

444 Hospital Way, #300 • Pocatello, Idaho 83201 • (208) 236-6160

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

December 16, 2008

RECEIVED

DEC 18 2008

Mr. Ron Tillotson
P.O. Box 261
Lava Hot Springs, Idaho 83246

Department of Water Resources
Eastern Region

Re: Ron Tillotson RV Park Water System Improvements – Well Site Evaluation for Proposed Water System Location, Bannock County
DEQ #03-08-24

Dear Mr. Tillotson:

On November 19, 2008, the Idaho Department of Environmental Quality (DEQ) conducted a site visit and evaluation of the proposed well location for Tillotson RV Park. The well will service a new public water system to supply the approximately 54 hook-ups in the RV park during seasonal periods of operation.

During the site visit, I was accompanied by Bryan R. Phinney and Jeff Mansfield of Keller Associates who represented the property owner. DEQ personnel present, in addition to me, included Chuck Kettermann, Barbara Jones, Tom Hepworth, and Craig Borrenpohl, all of the DEQ Pocatello Regional Office.

The proposed well location is within the property designated as Tillotson RV Park. The property is located on the east side of Old Highway 30 North, approximately 0.3 miles north of the intersection of Highway 30 and Old Highway 30 North, east of Lava Hot Springs. On the property, the proposed well is staked within a loop drive near the entrance to the RV park. Approximate setback from the loop road is less than 15 feet. Setback from the major access road to the park, Old Highway 30 North, is approximately 360 feet. RV hook-up sites will surround the well location as close as approximately 5 feet, according to plan maps provided by Keller Associates. Additionally, the proposed location is within an elbow bend of the meandering Portneuf River. Setback from the river bank was measured at 120 ft from the west bank of the river to the well. To the northeast of the well, the river bank was 130 ft from the well.

The site evaluation considerations included the following items: flood plain restrictions, potential contaminant sources, setback requirements for a public water system well, surface and ground water interaction potential, and well construction to prevent the intrusion of surface water into the well production zone.

A flood plain evaluation was completed by Keller Associates which determined that the proposed well location is within the 100-year flood plain of the Portneuf River per Bannock County Planning and Zoning review. Therefore, the well head and associated structures will be designed to protect against 100-yr flood concerns.

No visible contaminant sites or existing potential contaminant sources were identified during the evaluation. A vault-type toilet building, located more than 100 feet south of the well location, is the only current potential contaminant source, but because it is a vault system and will be pumped regularly, there is little concern for bacteriological contamination from the toilet facility. The closest residential homes utilize on-site sewer systems and are more than 100 feet away from the site. The well lot and access road will be controlled by Tillotson RV Park.

During the evaluation, it was determined that the proposed well site meets current property line and source of contamination setback requirements for a public water system well as set forth in the Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08) Subsection 900.01. However, also per IDAPA requirements, the well site must be protected from sources of contamination for a minimum distance of fifty (50) feet in all directions from the well. In order to minimize traffic and ensure that no chemicals (i.e., fertilizers, pesticides, herbicides) are applied near the wellhead, landscaping and development should not occur within the 50-foot setback from the well in order to make certain that the well water is protected. DEQ routinely recommends fencing the 50-ft setback around a well.

The proximity of the well to the Portneuf River is of concern as ground water directly connected to surface water poses the risk of microbiological contamination of water in the well. Due to the vulnerability of the well location, DEQ requests that a hydrogeological evaluation be conducted to evaluate the connectivity of the Portneuf River with water in the well, after the well has been constructed and again during spring runoff when flow volume in the Portneuf River is high. Because the proposed well location does not meet the 500-ft setback requirement under the "Ground Water Under the Influence (GWUDI)" regulations for the State of Idaho, DEQ has significant concern that a surface water and ground water interconnection exists.

In order to avoid a GWUDI evaluation, the source should be located as far as possible from surface water and should be constructed under the personal supervision of a licensed engineer to

ensure that surface casing, well seal, and position of the intake zone are all placed in a manner that will exclude surface water influence. These activities shall be documented to the satisfaction of DEQ and the District Health Department. If the results of the hydrogeological evaluation indicate an influence to the well from surface water, then the property owner must provide treatment of the water before serving it to the public.

Well construction information provided in the Keller Associates documents indicates that permanent casing will be surrounded with grout annular sealant down to 60 ft. below land surface with the depth between 60 and 100 ft below land surface sealed by a bentonite seal (coated pellets). Per IDAPA Rules, all chip bentonite seals installed through water shall only be used in annular spaces of at least four (4) inches on all sides of the casing (coated pellets meet the definition of chip bentonite seals in the Rule). For dry annular spaces, the Rule states that a minimum of two (2) inches of annular space on all sides of the casing is required. The closest wells to the proposed location encountered water at 48 ft and 70 ft below ground surface, however, these wells are not located as close to the river channel as the proposed well. DEQ believes that due to the proximity of the proposed well to the Portneuf River, first contact with ground water will be relatively shallow and that emplacement of grout and bentonite seals will occur through water. Therefore, alterations to the well drilling plan and construction should be made according to the Rule.

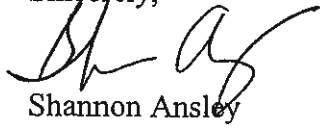
DEQ requests that a resubmittal of well construction details and a proposed water testing plan be submitted prior to approval of this well site. If the well site is moved a significant distance from the visited site, a new well site evaluation must be completed.

Your consultant must provide three (3) stamped copies of revised well construction plans and specifications along with the appropriate DEQ checklists to this office for review and approval prior to beginning construction of the well or any part of the water system. The review of those plans will be addressed in a separate letter. The well will need to be evaluated to assure that it was drilled pursuant to the public drinking water well requirements stated in your drilling permit issued by the Idaho Department of Water Resources (IDWR) and plans and specifications approved by DEQ. If the well is located with the requirements and monitoring specifications described above, this site is approved. Before a well is approved to supply water to the public, the property owner must monitor the well water for nitrate, nitrite, and bacteriological contaminants. Please contact Barbara Jones, Drinking Water Analyst, for additional information.

Ron Tillotson RV Park
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If you have any questions or comments please contact this office at (208) 236-6160.

Sincerely,



Shannon Ansley
Environmental Hydrogeologist

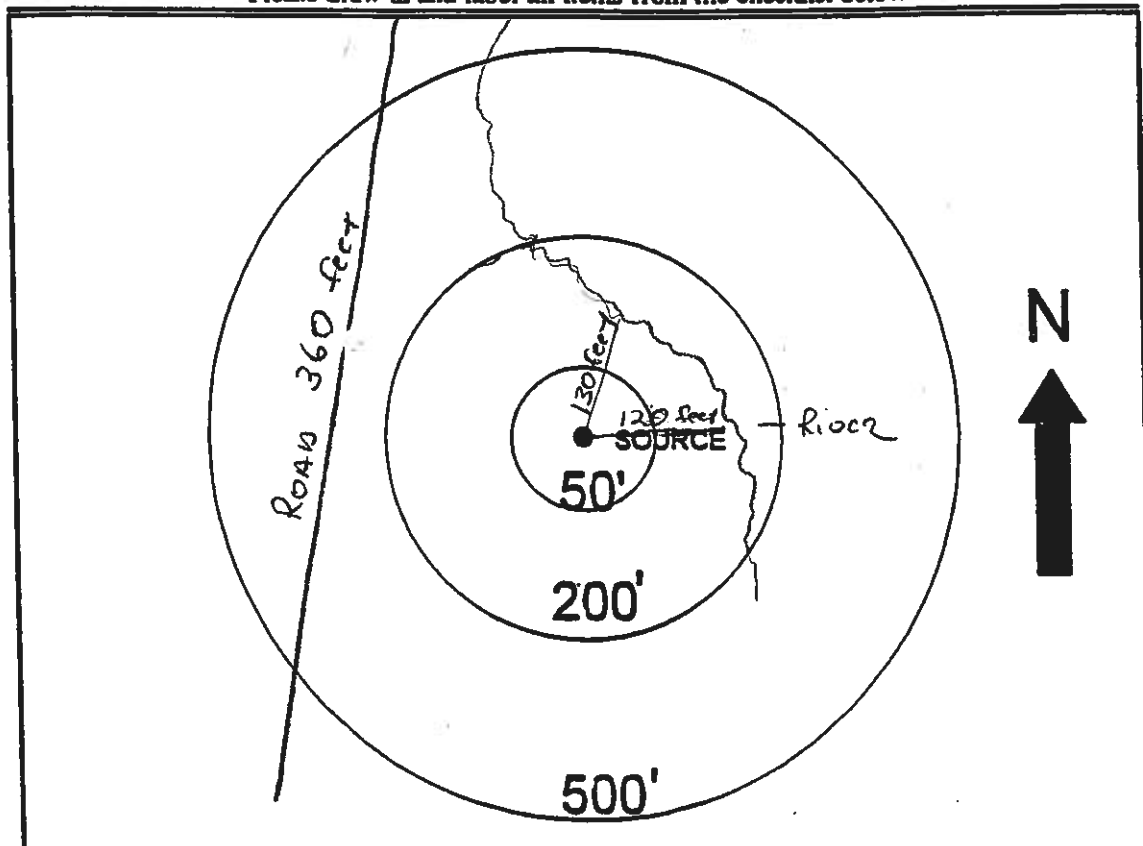
Enclosure: Site Evaluation of Proposed Well for Ron Tillotson RV Park

cc: Bryan R. Phinney, P.E. – Keller Associates
Tom Wood, P.G. – Clearwater Geosciences, LLP – Idaho Falls
Dennis Dunn – IDWR – Idaho Falls
Tom Hepworth – Engineering Manager – DEQ – Pocatello (email)
Chuck Ketterman, P.E. – DEQ – Pocatello (email)
Barbara Jones – DEQ – Pocatello (email)
Craig Borrenpohl – DEQ – Pocatello (email)
DEQ #03-08-24

System Name: Tillitson R.V. Park Source Name: Well #1
 Source Type: WELL (spring, well, infiltration gallery) Maximum Pumping Rate: 35 gpm
 System Representative: Shannon Ansley Date: 11/19/08

MAP OF SOURCE VICINITY

Please draw in and label all items from the checklist below



Map Checklist:

☒ Surface water within 500'☐ On-site sewage systems or lagoons within 500'☒ Municipal or on-site sewer lines within 200'☒ Dairies or livestock feeding operations within 500'☒ Stormwater disposal systems within 500'☒ Injection Wells within 500'☐ Other sources of contamination within 500'

ADDITIONAL EVALUATION COMMENTS:

42.37' 38.692 N
 111.59' 45.391 W

5,108 feet ELEVATION

WELL SITE INSPECTION FIELD SURVEY

DEQ # | | |

System Name: _____ Source Name _____

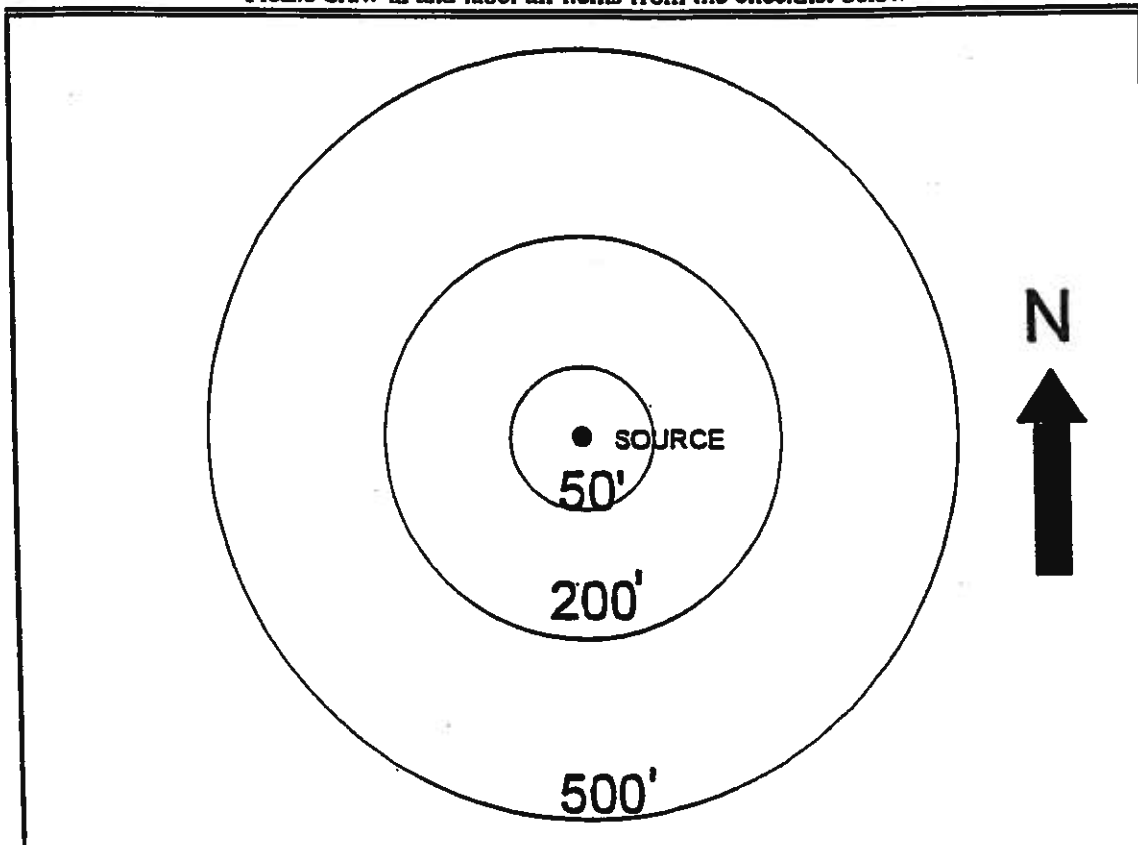
Source Type: _____ Maximum Pumping Rate: _____
(spring, well, infiltration gallery)

System Representative: _____

Date: _____

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