

MEMORANDUM

Date: April 10, 2013
To: Craig Saxton
From: Blake Jordan
Re: Field Narrative Report 29-13672 (Katsilometes)

On November 9th, 2012 I conducted a beneficial use field exam for water right 29-13672. George Katsilometes (permit holder) and one of his employees accompanied me as I conducted my field investigation. During the field investigation I did observe ground water (geothermal) being utilized to heat two buildings and approximately five pools. This facility is known as the Lava Hot Springs Inn.

Mr. Katsilometes diversion works consist of three interconnected ground water points of diversion with 5 hp pumps (according to Katsilometes) which supply water to two buildings and approximately five pools. The groundwater circulates through the two buildings and five pools then is discharged into the Portneuf River at two locations. There are approximately 11 additional round therapy pools that were not in use. According to Mr. Katsilometes, the water delivery infrastructure for the therapy pools has been completed but water has not been diverted into the pools. According to Mr. Katsilometes, these ground water wells do not supply water for drinking. The drinking water comes from a spring.

The two buildings are heated by running geothermal water through two heat exchange units. There is one heat exchange unit per building.

Lava Hot Springs Inn is located in Lot 2 (SWSE) of 09S, 38E, Section 21. The three points of diversion are also located in Lot 2 (SWSE) of 09S, 38E, Section 21. No flow measurement was taken during the field exam. There was no access to a straight pipe for the flow meter. Possible measurement at the discharge points into the Portneuf river can be done by using a five gallon bucket and stop watch.

A Tuf-2000W Ultrasonic Flow meter is installed on one of the three points of diversion. The flow meter is battery operated and according to Mr. Katsilometes it measures the rate of diversion, totalizes volume and takes temperature readings. The installed flow meter was not operating during the field exam. Mr. Katsilometes indicated that it malfunctioned sometime prior to my visit. I asked how measurements are recorded from the flow meter and he indicated that readings from the flow meter are manually taken and recorded on a spreadsheet daily.

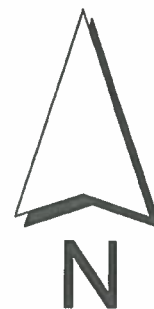
Based on my field exam findings Mr. Katsilometes is beneficially using water to heat two buildings and five pools. Pictures of the heat exchange units, points of diversion, and discharge points into the Portneuf River were taken. I chose not to take pictures of the pools because Mr. Katsilometes customers were using the pools at the time of the exam. Because the installed flow meter was not operating at the time of the field exam, I could not determine whether Mr. Katsilometes has completely met the

requirements described in condition 8. It is also uncertain whether Mr. Katsilometes has completely met the requirements under condition 9. During the field exam Mr. Katsilometes was not asked to demonstrate how water surface elevation measurements are taken. I recommend that a second beneficial use field exam be conducted to measure the amount of water being used by measuring the water that is discharge into the Portneuf River, verify that the installed flow meter logs the instantaneous rate of diversion, total volume, and temperature, and verify that water surface elevation measurements can be performed.



0 35 70 140 Feet

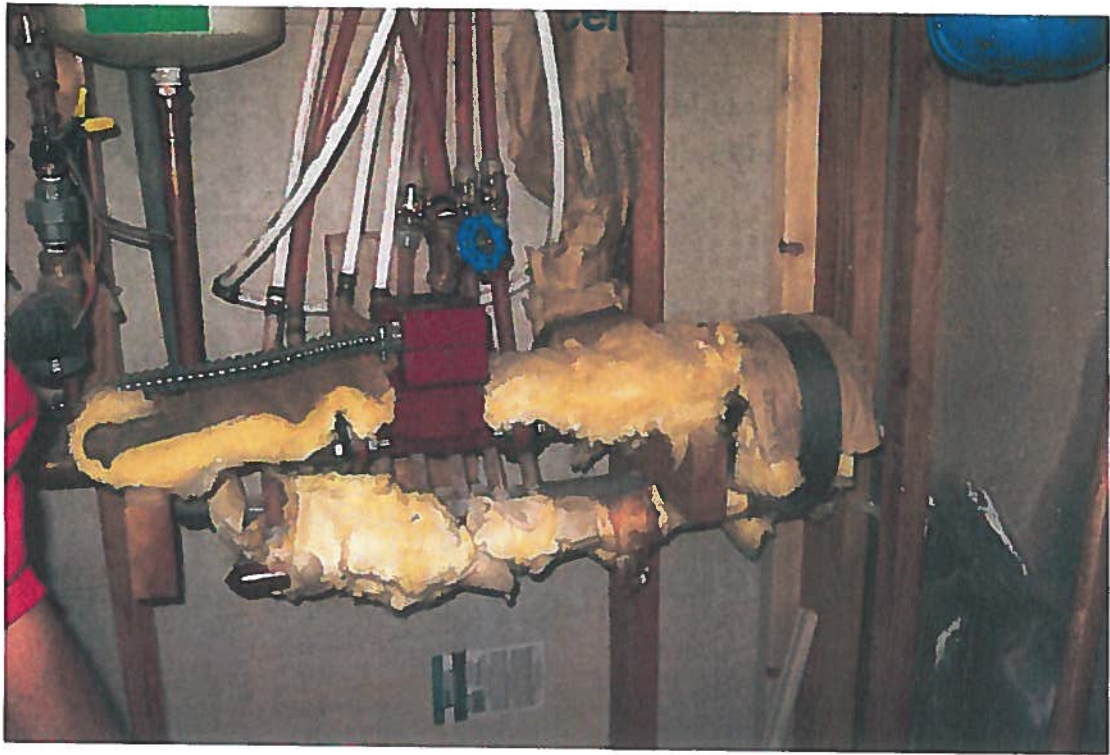
- 1 inch = 61.57 feet



2010 Aerial Photography



Heat exchange unit in North Building



Heat Exchange unit in South Building



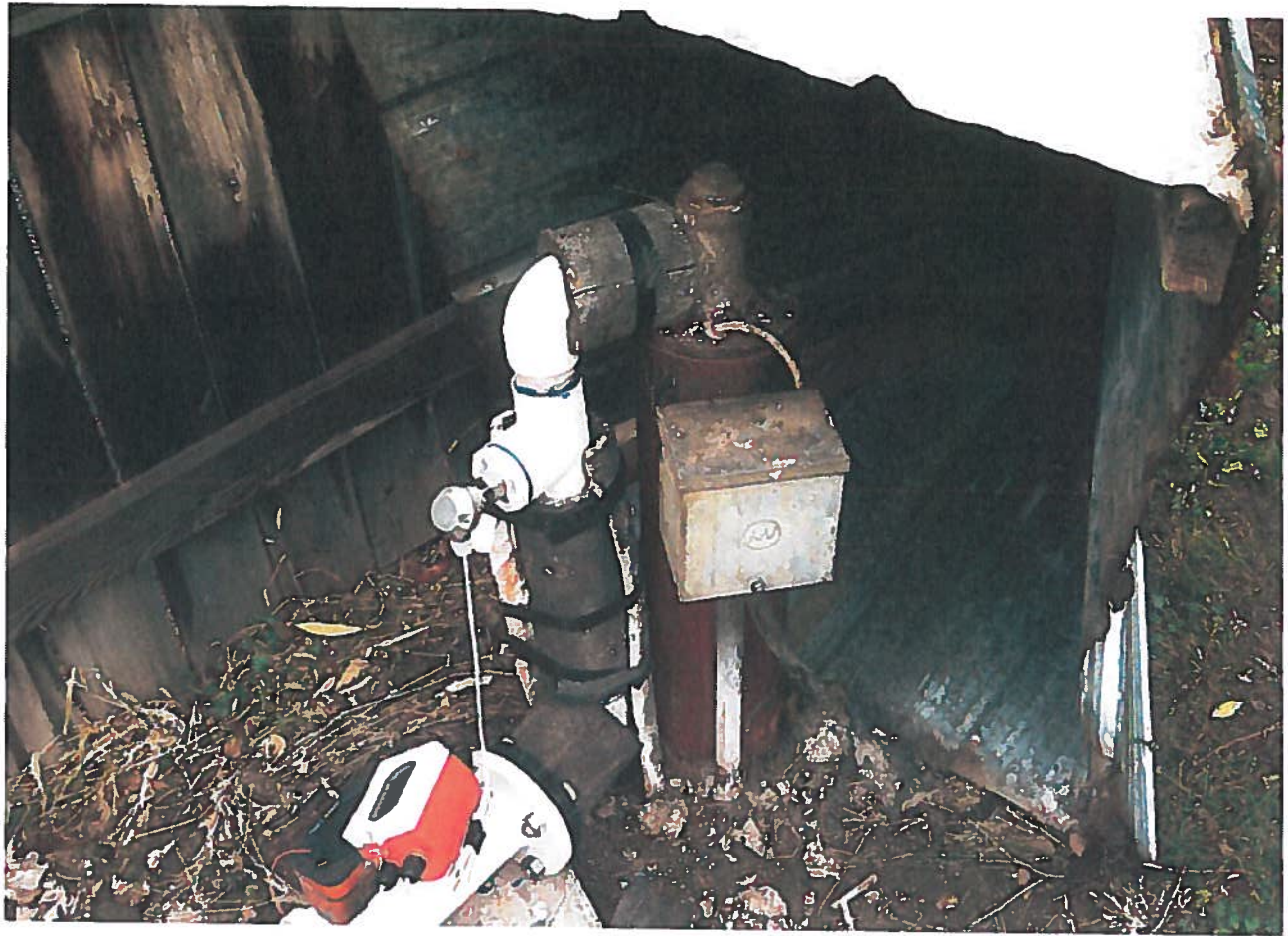
Discharge Point on East side of Property



Discharge Point on West side of property



⌘ Tuf-2000w flow meter



Pod w/ flow meter



East POI



West POD