

SPECK & AANESTAD

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January 24, 2005

Mr. Allen Merritt
Idaho Department of Water Resources
1341 Fillmore, Suite 200
Twin Falls, Idaho 83301

**Re: Warfield Hot Springs Diversions
Our File No. 1168/990235**

Dear Allen:

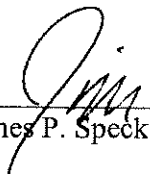
I am writing in response to Travis Thompson's January 17, 2005 letter to you concerning the above-referenced matter. As you know, I represent both Steve Reuther and Jay Pace.

In the spring of 2003 Brockway Engineering conducted tests on Mr. Reuther's diversion works and its possible impact on water flows for the historical gravity pipeline collection box. A written report was prepared and sent to you. I am including a copy for reference purposes. It clearly establishes that diversions pursuant to Mr. Reuther's permit do not have any impact at all on water flows in the old gravity pipeline. Furthermore, at this point Mr. Stonebeck has nothing more than a claim to a water right.

The burden is on Mr. Stonebeck to establish that any problems with water delivery through the old gravity pipeline are due to the diversions made by Mr. Reuther. This is especially so in light of the Brockway report. Mr. Stonebeck does not have any such proof or evidence and his request for an investigation should simply be disregarded.

Sincerely yours,

SPECK & AANESTAD
A Professional Corporation

By: 
James P. Speck

JPS/jef
Enclosure
cc: S. Reuther w/encl.

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FAX COVER SHEET/MEMO

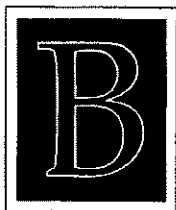
To: Mr. Steven Reuther	Fax Copies:
Fax #: 1-310-205-5380	Fax #'s:
From: James P. Speck	Pages: 2 including this cover page
Date: May 1, 2003	
Subject: Steven Reuther/Warfield Hot Springs Lot	Our File No. 1168/990235

COMMENTS:

Steve -

Here is Brockway's report to IDWR - it should quell any concerns they might have had about the impact of your new system on the old pipeline. I'll keep you posted on these matters.

Jim



BROCKWAY
ENGINEERING
P.L.L.C.

Hydraulics

Hydrology

Water Resources

RECEIVED

MAY 01 2003

SPECK & AARNESTAD

April 30, 2003

Mr. Allen Merritt
Southern Region
Idaho Department of Water Resources
1341 Fillmore Street, Suite 200
Twin Falls, ID 83301

Subject: Reuther Property-Warm Springs Creek -Geothermal
Development

Dear Allen:

Enclosed is a brief report on the geothermal development for the Reuther property at Warfield Hot Springs on Warm Springs Creek above Ketchum.

The low temperature geothermal evaluation objective was to develop the resource without impacting existing uses, particularly the discharge allowable to the pipeline serving the neighbors from the 'old' concrete collector.

Please call me if you have any questions.

Sincerely,

Charles E. Brockway, P.E., Ph.D.

CHARLES E.
BROCKWAY,
Ph.D., P.E.

CHARLES G.
BROCKWAY,
Ph.D., P.E.

Enclosure: Geothermal Development Report

cc: Jim Speck

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Reuther Property
Geothermal Collector System
Analysis and Design
Brockway Engineering P.L.L.C.
April 29, 2003

The Reuther Property is located at Warfield Hotsprings on Warm Springs Creek west of Ketchum, Idaho. Specifically, the property is part of subdivided Homestead Entry 389. Low temperature geothermal springs have been historically developed and utilized by different parties. Currently, the only development is from a spring source near the new road to the Reuther residence. An existing spring has been developed by construction of a vertical, 4 ft diameter concrete pipe with a 6 inch PVC pipe conveying water south to owners of lots within the subdivision ('old' collector). Water rights to be diverted from this source are not specific as to the discharge authorized.

The objective of this project was to evaluate the feasibility of low temperature geothermal water development for the new Reuther residence. This entailed evaluation of the source and magnitude of potential development for design of geothermal heating systems and other geothermal water uses associated with the residence. One constraint on the development was maintenance of 'historical flow' in the pipeline serving existing users.

Site evaluation included determination of the source(s) of geothermal water and identification of geology and formations from which geothermal water could be developed. This involved an inventory of the existing sites, strategically located test pits to identify the flow patterns and low temperature geothermal water interactions with Warm Springs Creek.

A pre-construction pump test was performed to determine the feasibility of locating a permanent hot water collector near the south end of the property adjacent to Warm Springs Creek. During this test, water levels in open test pits were monitored to determine the response of the geothermal system to pumping of the test pit. Water levels in the 'old' concrete collector were monitored during the test and no response was observed during the approximately 8 hour test.

Based on the aquifer evaluation and pump test, a permanent concrete collector was designed and installed near the south end of the project. A perforated buried pipe collector was installed approximately parallel to Warm Springs Creek and leading to the concrete collector.

A pumping test was performed on October 21, 2001 on the new collector using a portable pump. Water levels and temperature in the new collector and the 'old' collector were monitored to determine the collector yield and ascertain whether there was any impact of pumping on the 'old' collector from which water flows to the neighbors pipeline.

The pumping test was conducted for 6.5 hours with discharges from 103 to 185 gpm and resulting drawdown in the pumped collector from 0.53 to 1.18 feet. There was not change in the water level in the 'old' collector during the test. No temperature change was observed in the pumped water. The data is shown on Data Chart 2 and accompanying spreadsheet.

Based on this data a maximum design discharge for the Reuther geothermal system of 185 gpm was recommended.

Data

Reuther Property
Geothermal Collector Pump Test

Brockway Engineerin Oct. 23, 2001

Elevation of Measuring Point for Collector Water Level 96.02
Elevation of Measuring Point-Old Collector Water Leve 98.06

Area Orifice

Orifice Dia Cd ft^2

2.512 0.694 0.034416
3.009 0.776 0.049382

Time	Depth to Water in Collector	Elev. of Water in Collector	Orifice Dia. Inches	Discharge Meas. 4 Inch Pipe Orifice Head	Inches	gpm	Water Temp. Discharge Pumped	Depth to Water-Old Collector
	Ft	Ft					Deg F	Ft
9:20 AM								
9:55 AM	1.62	94.40						0.99
10:40 AM			2.50	18.50	106.8			Start Pump
10:45 AM	1.79	94.23	2.50	18.50	106.8			
10:48 AM	1.84	94.18	2.50	18.00	105.4	115.4		
10:51 AM	1.93	94.09	2.50	17.50	103.9			
10:58 AM			2.50					0.99
11:01 AM	2.00	94.02	2.50	17.25	103.14	113.6		
11:10 AM	2.05	93.97	2.50	17.25	103.14			
11:20 AM	2.10	93.92	2.50	17.00	102.39	113.8		
11:30 AM	2.11	93.91	2.50	17.38	103.51			
11:35 AM			2.50					0.98
11:50 AM	2.13	93.89	2.50	17.25	103.14	114.4		
12:00 PM			2.50					0.98

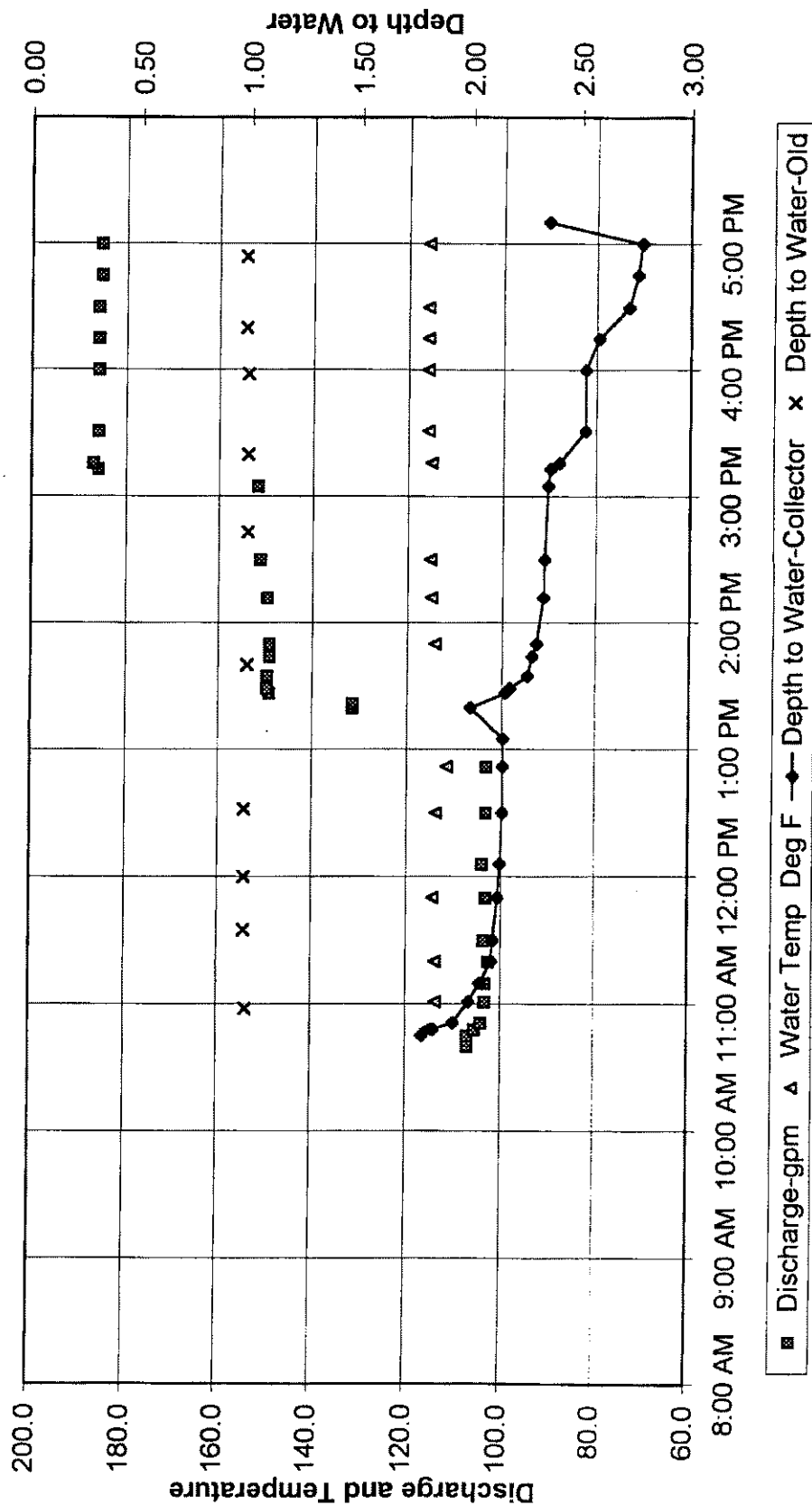
Data						
12:06 PM	2.14	93.88	2.50	17.50	103.88	Water still flowing in old collector to WS
12:30 PM	2.15	93.87	2.50	17.25	103.1	
12:32 PM			2.50		113.8	0.98
12:52 PM	2.15	93.87	2.50	17.25	103.1	
1:05 PM	2.15	93.87	2.50		111.5	
1:12 PM			2.50	0.00	0.0	Pump off-Change pumps
1:20 PM	2.00	94.02	2.50	28.00	131.4	Begin Pumping
1:22 PM			2.50	28.00	131.4	
1:27 PM	2.16	93.86	2.50	36.00	149.0	
1:29 PM	2.18	93.84	2.50	36.25	149.5	
1:35 PM	2.26	93.76	2.50	36.25	149.5	
1:40 PM			2.50			0.99
1:42 PM			2.50			Water still flowing in old collector to WS
1:44 PM	2.28	93.74	2.50	36.00	149.0	
1:50 PM	2.30	93.72	2.50	36.00	149.0	114.1
2:12 PM	2.33	93.69	2.50	36.25	149.5	115
2:30 PM	2.34	93.69	2.50	37.00	151.1	115.2
2:43 PM			2.50			0.99
3:05 PM	2.35	93.67	2.50	37.25	151.6	
3:10 PM				0.00	0.0	Pump offchange orifice old collector flowing
3:13 PM	2.36	93.66	3.00	21.75	185.8	Max Pump
3:16 PM	2.40	93.62	3.00	22.00	186.9	115.1
3:20 PM			3.00			0.99 Water flowing from spring to Warm Springs
3:31 PM	2.52	93.50	3.00	21.75	185.8	115.8
3:58 PM			3.00			0.99
4:00 PM	2.52	93.50	3.00	21.75	185.8	115.9
4:15 PM	2.58	93.44	3.00	21.75	185.8	115.9
4:20 PM			3.00			0.98
4:30 PM	2.72	93.30	3.00	21.75	185.8	115.9
4:45 PM	2.76	93.26	3.00	21.63	185.3	Water still flowing in old collector to WS

Data

4:54 PM	2.78	93.24	3.00	21.63	185.3	115.8	0.98	Water flowing from spring to Warm Springs
5:00 PM			3.00	0.00	0.0			Pump off
5:01 PM			3.00					Left site, CEB
5:10 PM	2.35	93.67	3.00					
5:13 PM			3.00					

Data

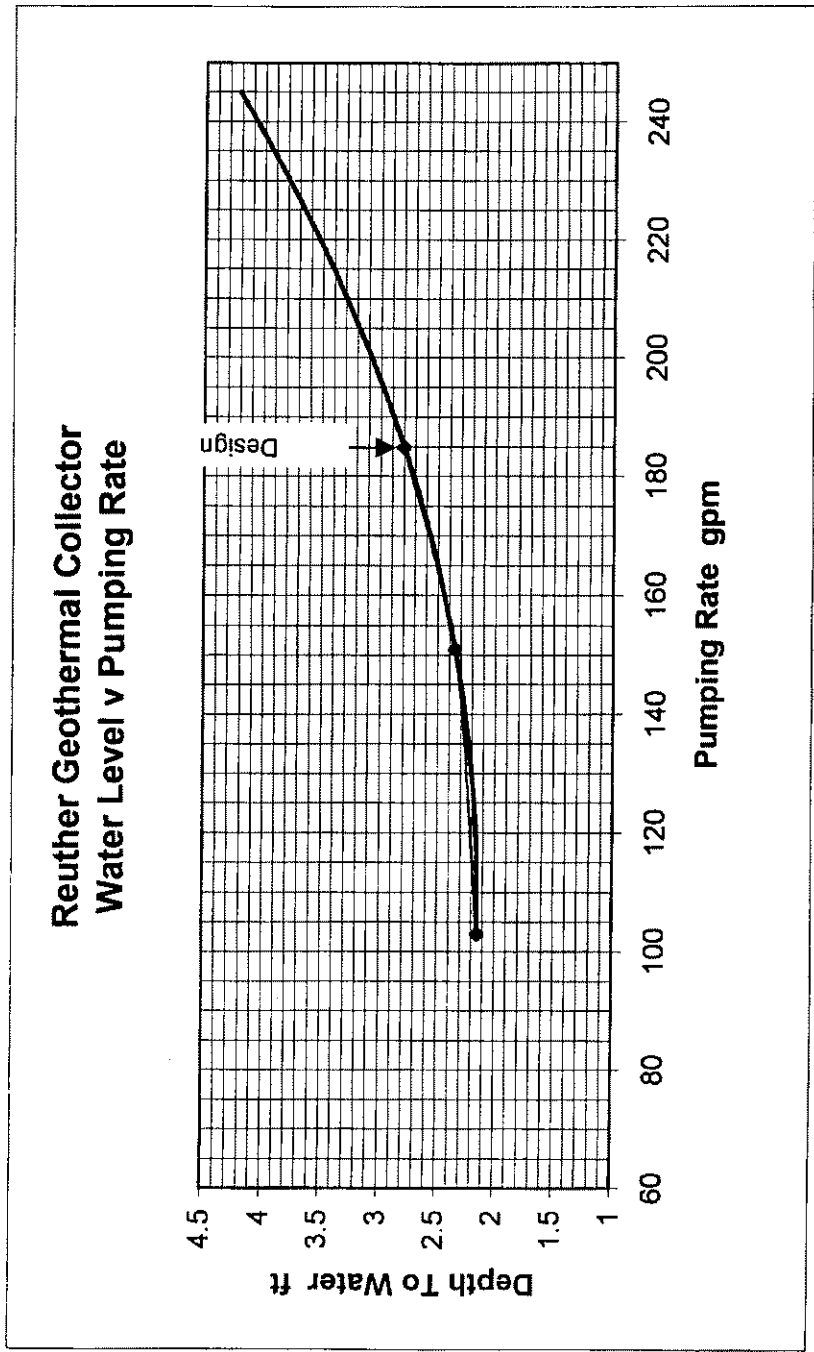
Reuther Geothermal Collector Pump Test-October 23, 2001

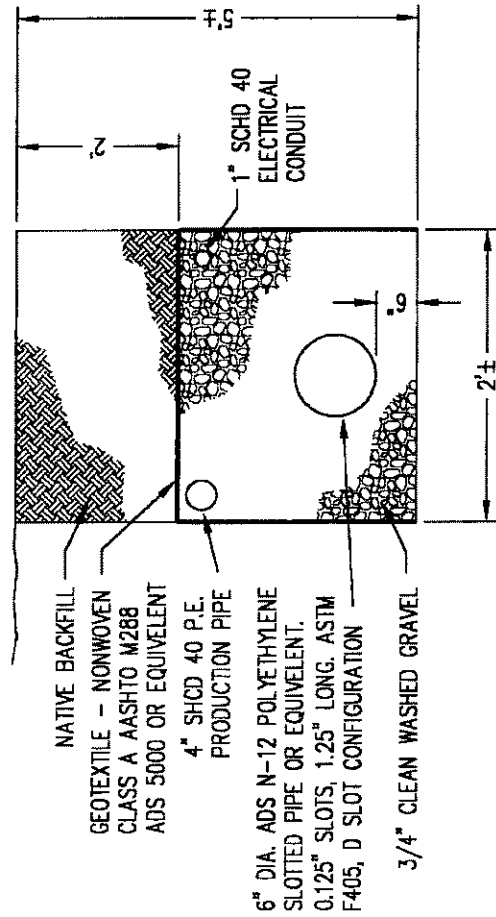


Pumping v Water Level

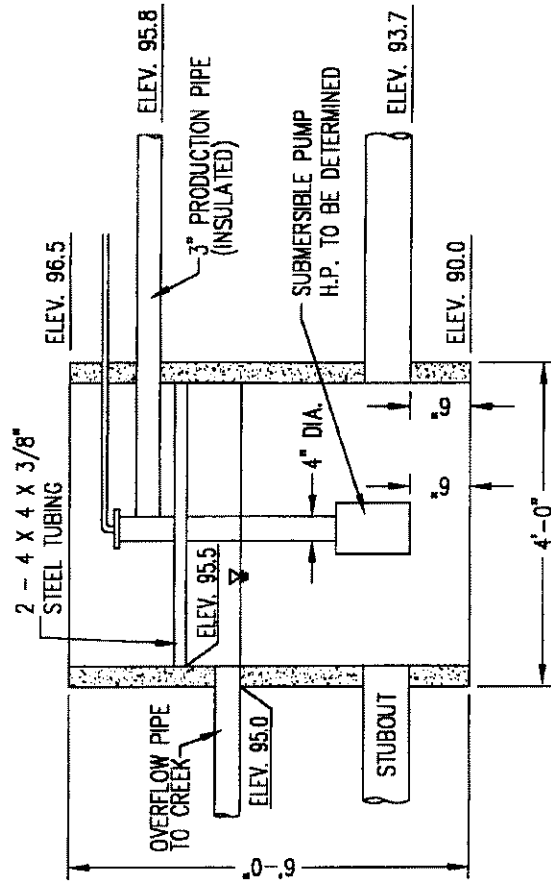
Reuther Geothermal Collector Test
Water Level in Collector vs Pumping Rate

Pumping	Water Lev el
2.15	103
2.35	151
2.8	185





TYPICAL TRENCH DETAIL
 N.T.S.



SUMP DETAIL
 N.T.S.

