STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 47-7606
Exam Date: March 2007

1. Current Owner: COLLEGE OF SOUTHERN IDAHO
PO BOX 1238
TWIN FALLS ID 83303-1238
(208)734-0353

2. Information provided by: Mike Mason
Phone No: 732-6203
Address: CSI Business Office
Relationship to Permit Holder: CSI Vice President of Administration

3. **SOURCE** **TRIBUTARY**
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 47-7478
2. Other water rights with the same point of diversion: 47-7478

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER	NE1/4SW1/4	Sec. 4,	Twp 10S,	Rge 17E, B.M.	
TWIN FALLS County					
GROUND WATER	SE1/4SW1/4	Sec. 4,	Twp 10S,	Rge 17E, B.M.	
TWIN FALLS County					

Method of Determination: USGS GPS points

2. **PLACE OF USE:** HEATING

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10S	17E	4									X	X	X	X		X			

Method of Determination:

3. __X__ Delivery System Diagram Attached (required). Indicate all major components and distances between components. (See CSI Geothermal Development Timeline along with map)

__X__ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

__X__ Aerial Photo Attached (required for irrigation of 10+ acres).

_____ Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Well # 1 _____	_____	100	_____	_____	1272 gpm_____
Well # 2 _____	_____	75	_____	_____	1550 gpm_____

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements:

The total flow capacity of the two wells based on pump capacity was 6.29 cfs (2822 gpm). The college entered into an agreement in November of 1989 to not pump more than 6 cfs from their two water rights. Therefore the total diversion rate allowed to the college for WR's 47-7606 and 47-7478 is 6 cfs.

E. FLOW CALCULATIONS ____Additional Computation Sheets Attached

Measured Method:

Water right 47-7478 has been recommended to receive 1.38 cfs based on the field exam in 1985. Because the CSI system shows the capacity to pump the full 6 cfs allowed under the 1989 agreement, the remaining **4.62 cfs** is recommended as the rate for water right 47-7606.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: None
2. Volume Calculations for Other Uses:

The annual volume of water used from the two wells was recorded for calendar years 1990 to current. The proof of beneficial use was submitted in 1993. The highest recorded volume prior to the proof of beneficial use being submitted in 1993 was in 1990, at which time the recorded annual volume was 734 af. Water right 47-7478 is recommended to receive 289 af, this leaves water right 47-7660 with **445 af**.

G. NARRATIVE/REMARKS/COMMENTS

In 1978 the College of Southern Idaho began to develop the use of geothermal water from groundwater wells as a source for heating the campus and for the development of a fish propagation facility. The development included the submittal of two applications for these uses, water rights 47-7478 and 47-7606. The proof of beneficial use for the first water right (47-7478) was submitted in 1983, the field exam for this right was conducted in 1985. At which time an assessment was made of the facility and a recommendation for the license was submitted to the State office for approval. However, the State office identified several issues that needed to be addressed prior to completing the licensing of the water right. In 1993 the proof of beneficial use was submitted for the second water right (47-7606).

In 2007 a renewed effort to license the two rights was undertaken. The original issues for water right 47-7478 were addressed and the combined maximum rate and volume for the two rights was identified. The rate was limited to 6 cfs based on a 1989 ground water use agreement. The volume was limited to the maximum-recorded

volume during the permitting period, which was 734 af in 1990. It was also found that use of the fish propagation was no longer used when the second right was developed, for this reason it was taken off of water right 47-7606. The following is a table showing the recommended amounts for the two water rights:

WR	Rate (cfs)	Heating Volume (af)	Fish propagation volume (af)
47-7478	1.38	289	58
47-7660	4.62	445	0
Total	**6.0**	**734**	**58**

Have conditions of permit approval been met? __X__Yes _____No

H. RECOMMENDATIONS

1. Recommended Amounts

BENEFICIAL USE	PERIOD OF USE		DIVERSION RATE	ANNUAL VOLUME
HEATING	01/01 to 12/31		4.620 CFS	445.00 AF
		Totals:	4.620 CFS	445.00 AF

2. Recommended Amendments

_X_Change P.D. as reflected above ___Add P.D. as reflected above ___None

_X_Change P.U. as reflected above ___Add P.U. as reflected above ___Other

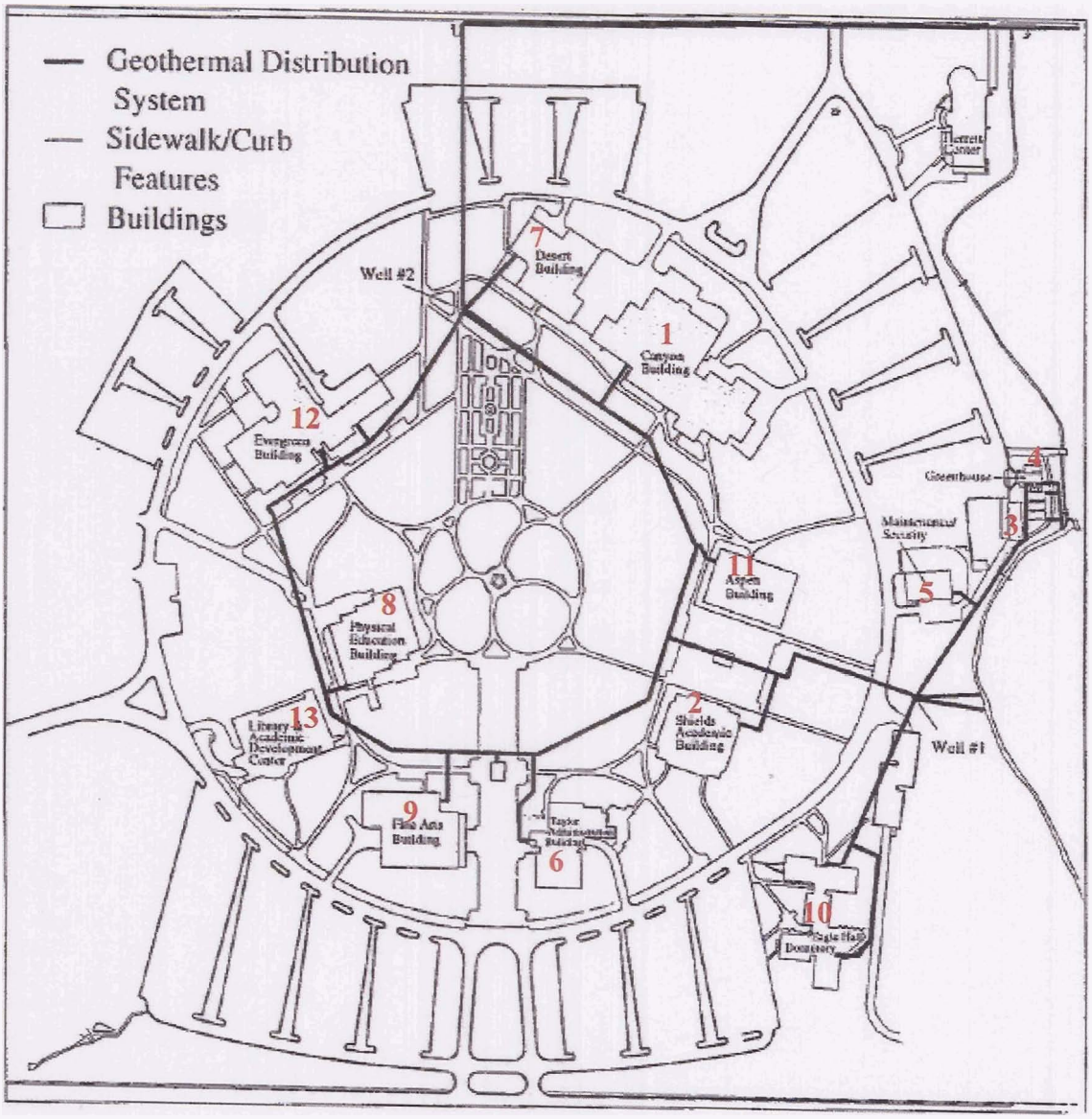
I. AUTHENTICATION

Field Examiner's Name: Nathan Erickson _____ Date: 3/29/07_____

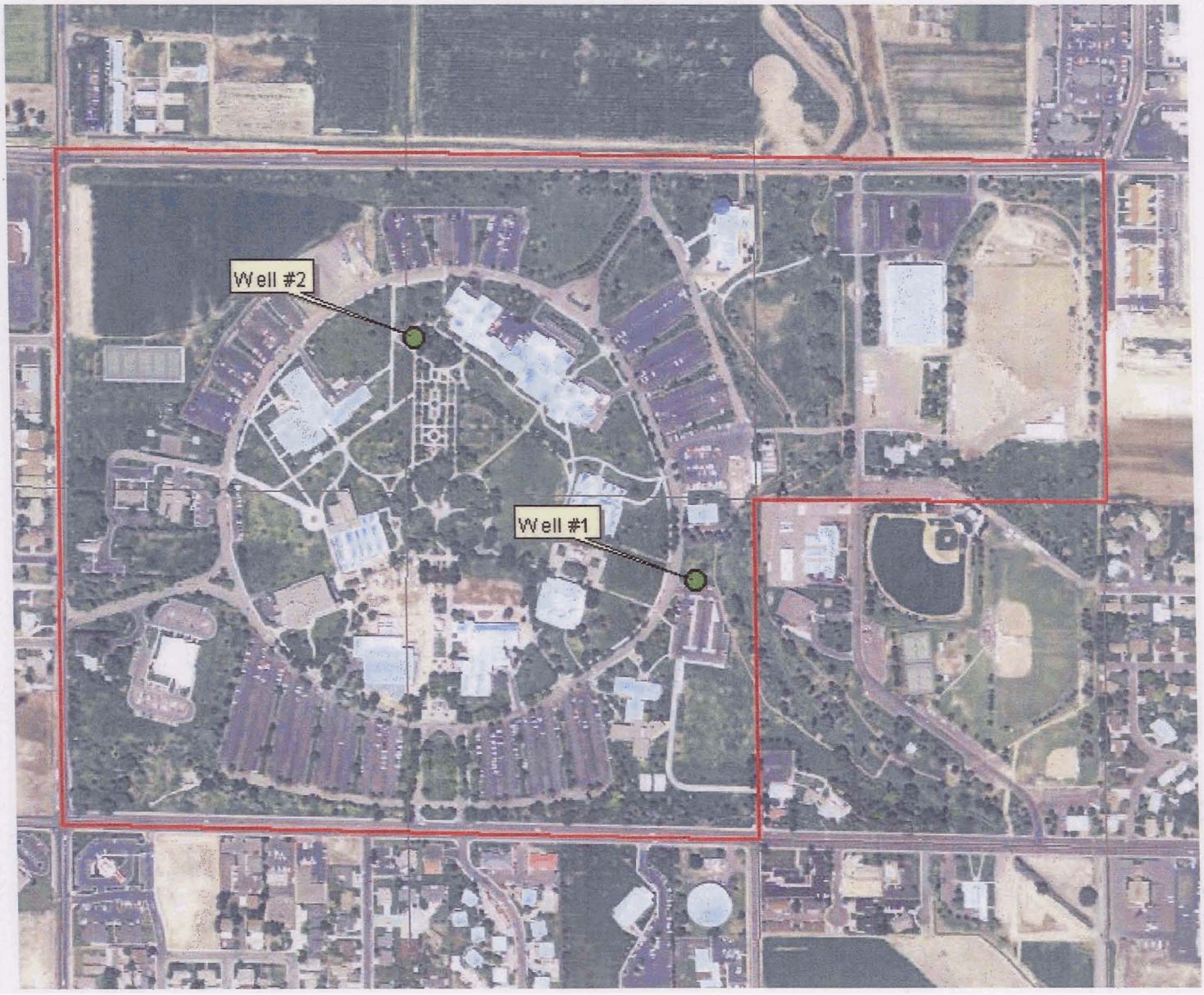
Reviewer_____ Date_____

CSI Geothermal development Timeline

1978 – 47-7478 Application, 5cfs, heating and fish propagation
1979 – Well #1 completed (800gpm)
1979 – 47-7606 Application, 15cfs, heating and fish propagation
1981 – Well #2 completed (1100gpm)
1981 – Vo-Tech D connected to system (1)
1982 – Shields retrofit (2)
1982 – Physical Plant connected (3)
1982 – Greenhouse connected (4)
1982 – Maintenance shop connected (5)
1983 – 47-7478 Proof of beneficial use
1985 – Taylor building retrofit (6)
1985 – 47-7478 Amendment, added 2nd well
1985 – 47-7606 Amendment, added 2nd well
1985 – 47-7478 Field exam (see Gary Spackman Memo)
1986 – Desert retrofit (7)
1987 – Plastic Greenhouse added (4)
1987 – P.E. Gym retrofit (8)
1988 – Fine Arts retrofit (9)
1988 – Wells 1 and 2 interconnected
1988 – Dormitory retrofit (10)
1989 – 2 Greenhouses added (4)
1989 – Canyon retrofit (1)
1989 – Aspen retrofit (11)
1989 – Evergreen retrofit (SIDC) (12)
1989 – Agreement diversion rate will not exceed 6cfs
1990 – 734 af
1991 – 726 af
1992 – Installed pumps in wells
Well #1 max pumping rate 1,272 gpm (2.8 cfs)
Well #2 max pumping rate 1,550 gpm (3.5 cfs)
1992 – Added A&B wings of Evergreen building
1992 – 570 af
1993 – 47-7606 Proof of beneficial use
1993 – 688 af
1994 – 827 af
1995 – Meyerhoeffer building added (13)
1995 – 710 af
1998 to Present – Various expansions and improvements to system
2001 – Well #1 Meter certification (400gpm)
2001 – Well #2 Meter certification (400gpm)


Geothermal Distribution System
Sidewalk/Curb Features
Buildings
Well #2
7
Desert Building
1
Canyon Building
12
Evergreen Building
4
Greenhouse
3
Maintenance/ Security
11
Aspen Building
5
8
Physical Education Building
2
Shields Academic Building
Well #1
13
Library & Academic Development Center
9
Fine Arts Building
6
10

CSI Geothermal Wells
Water Right 47-7606



0.25 0 0.25 0.5 Miles

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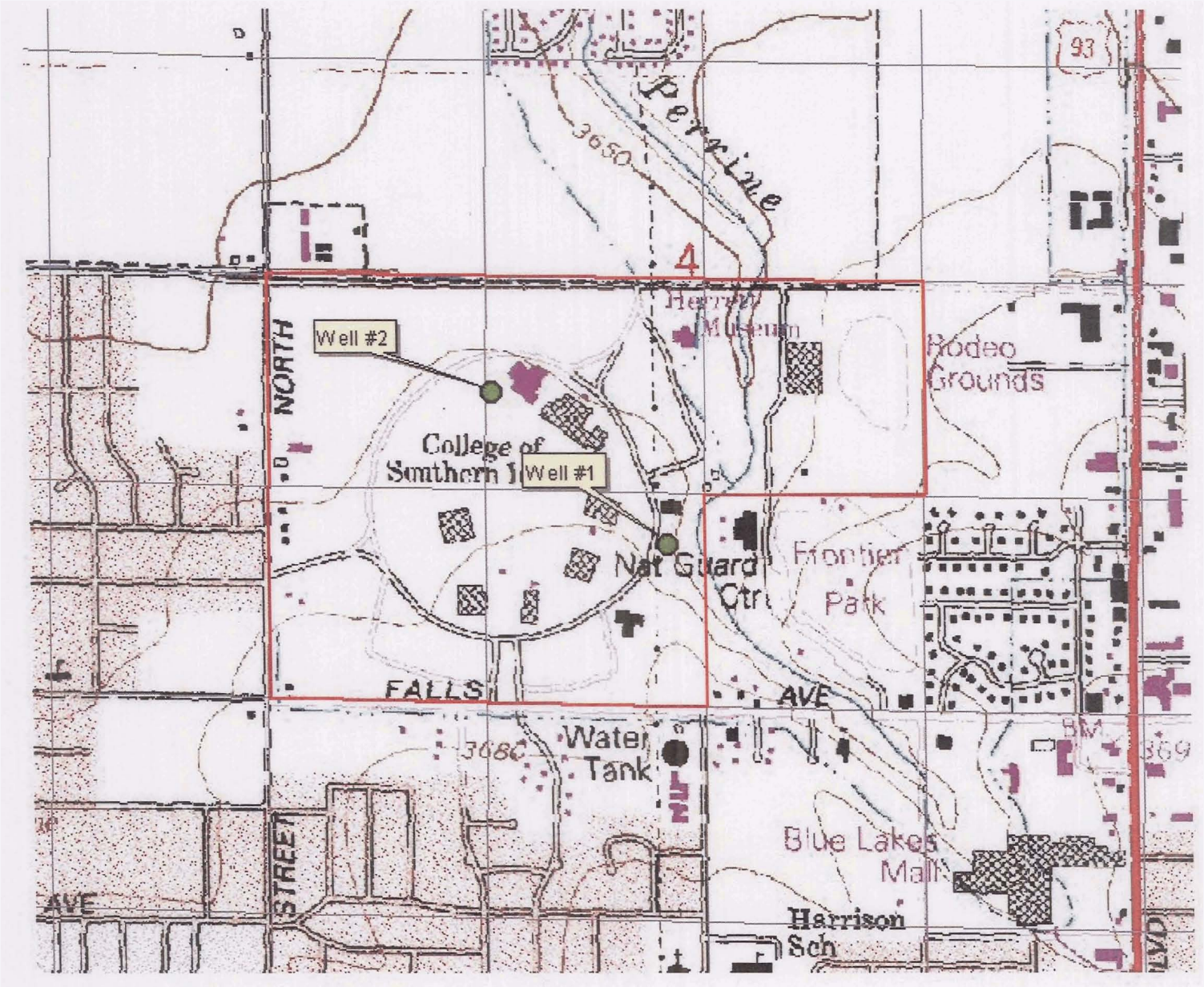
CSI Geothermal Wells
Water Right 47-7606



0.25 0 0.25 0.5 Miles

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