

This permit is required under the authority of Blaine County Zoning Ordinance 77-5, Chapter 17, Section 9.0 - 9.5.

NAME OF APPLICANT Michael Simpson PHONE 726-9583

ADDRESS P.O.Box 864 Ketchum, ID 83340

NAME OF ENGINEER, IF USED IN ASSISTING WITH THIS APPLICATION Donald R. Reichmuth, PE and Michael J. Leaverton, PE, of GEOMAX P.C. 622 6th Ave. S. Bozeman, MT 59715

PROPERTY LOCATION AND LEGAL DESCRIPTION SW¹/₄ Section 12, T.4N., R17E. See vicinity map attached to site plan

NAME AND REACH OF STREAM IN AREA OF PROPOSED WORK - MILEPOST DESCRIPTION Warm Springs Creek near MP 1.

LENGTH OF STREAM TO BE WORKED Approx. 300 LF

TYPE OF WORK TO BE DONE (riprapping, filling, log removal, bank grading, etc.) _____

Placement of large caliber rock in stream to form a drop-structure

TYPE OF EQUIPMENT TO BE USED Hydraulic excavator with hydraulic grappling device and rubber tired front end loader

DATE OF COMMENCEMENT AND COMPLETION OF WORK Soon after County, State, and Federal approvals weather permitting permitting. Completion should be 2-5 days after commencement
 WHEN WAS A STATE PERMIT APPLIED FOR AND HAS IT BEEN APPROVED? CONDITIONS? _____

State and Federal application applied for 10-9-87. Approval is pending.

ADDITIONAL INFORMATION TO BE SUBMITTED WITH APPLICATION:

Vicinity map of the area.

Names and addresses of property owners, on both sides of the stream, 300 feet above and 1,000 feet downstream from the proposed work site.

Plans and information done to appropriate scale, legibly and accurately showing:

1. Location and dimensions of the lot or property.
2. Location of existing or proposed structures and location of previous stream alterations.
3. Typical cross section of the proposed work.
4. Location of the lot in relation to the stream channel, floodway and floodplain.
5. A valley cross section of the area to be altered, if requested by County Engineer, showing the stream channel, floodway limit lines, elevation of land areas adjacent to the stream and the elevation of the Intermediate Regional Flood as determined by the HUD Flood Insurance Study.
6. Location of any drainageways or overflow channels through the property.
7. Statement to address potential beneficial and adverse impacts of the project in the immediate project area (upstream, downstream and across the stream). The following questions should be answered:

BRIEF IMPACT STATEMENT

- a. What problems (erosion, inundation, debris or gravel pile-up) have caused a need for the proposed project?
- b. What will occur if your project is not able to be done?
- c. Are there any other ways of handling the problem?
- d. What will be the beneficial results of the project (up, down and across the stream)?
- e. Will the project cause any negative impacts on you, the river or other landowners (up, down, across the stream or in general)?

APPLICANT'S SIGNATURE _____

DATE _____

Date received _____ Site inspection _____

Approval of cross section: _____ yes _____ no

Staff review and comments: _____

Board findings and conclusions of law, conditions and time limitation: Date: _____

CIVIL WORK

JOINT APPLICATION FOR PERMIT
U.S. ARMY CORPS OF ENGINEERS
AND
STATE OF IDAHO, DEPARTMENT OF WATER RESOURCES
STATE OF IDAHO, DEPARTMENT OF LANDS

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899 and Section 404 of the Clean Water Act. These laws require permits authorizing structures and work in or affecting navigable waters of the United States and the discharge of dredged or fill material into waters of the United States, including their adjacent wetlands. State permits are required under the State of Idaho, Stream Channel Protection Act (Title 42, Chapter 38, Idaho Code) and the Idaho Lake Protection Act, Section 58-142 et. seq, Idaho Code. This application will meet the requirements of the above agencies.

The applicant has sent copies of this application to the agencies checked: ID Dept. Water Res. - Boise , Cover d'Alene ; ID Dept. Lands , Corps of Engineers - Walla Walla , Seattle , Sacramento .

PLEASE TYPE OR PRINT

AGENCY USE	1. Corps of Engineers # _____ Date Received _____	2. State of Idaho # _____ Date Received _____	AGENCY USE
	3. NAME OF APPLICANT <u>Michael Simpson</u> Address <u>P.O. Box 864</u> City, State, Zip Code <u>Ketchum, ID 83340</u> Area _____ Area _____ Phone: Work: (____) _____ Home (208) 726-9585 Date of Application <u>Oct. 9, 1987</u>	4. AUTHORIZED AGENT <u>GEOMAX P.C.</u> Address <u>622 Sixth Ave. South</u> City, State, Zip Code <u>Bozeman, MT 59715</u> Area _____ Area _____ Phone: Work: (406) 586-0730 Home (406) 586-0078	

5. Location where proposed activity exists or will occur.

Name of waterway Warm Springs Creek

Tributary of Big Wood River

Ketchum, Idaho

In or near city or town

Blaine, Idaho 83340

County

State

Zip Code

Assessor's Description

Or

Tract or Gov. Lot

Latitude _____

Longitude _____

SW 1/4 Sec. 12

4N.

17E.

(Required when activity is located in Corps of Engineers Seattle District - See Appendix A)

6. Describe the proposed activity, including description of the type of structures, if any to be erected on fills, or pile or float-supported platforms. If additional space is needed, use a separate sheet. Note: Applications for Department of the Army permits must include one set of reproducible drawings no larger than 8 1/2 x 11 inches in size.

Describe the proposed activity in detail: SEE "BRIEF IMPACT STATEMENT" ATTACHED

7. Purpose and intended use:

Commercial _____

Public _____

Private X

Other _____

Describe: SEE ATTACHMENT

Length of project along stream or extension into lake or reservoir: 300 LF see site plan

Stream gradient: 0.009 ft/ft

Will material be placed waterward of ordinary high water mark? yes

Will material be placed in adjacent wetlands? no

Type of fill material: 2-3' dia. rocks (i.e. sand, etc.) Material Source: local quarry

Volume of material to be placed 140 ±20% (cubic yards)

Will excavation be required? very little Disposal Site Location: see attachment

Method of diverting flow, if needed: not needed

Method of controlling turbidity: not needed

8. Proposed Starting

Date of Project Within 10 days of obtaining necessary permits Estimated Duration of Project 2-5 days

Describe construction methods and equipment: The drop structures will be constructed of large caliber rocks. The rocks will be placed in the stream using a hydraulic excavator fitted with a hydraulic grappling device. Rocks will be delivered to the excavator with a rubber tired front-end loader. The rocks will be individually placed with the excavator along the specified alignment and at the required elevation.

9. If any portion of the activity is complete indicate month and year of completion none
Indicate the existing work on the drawings.

10. Names, addresses and telephone numbers of adjoining property owners, lessees, etc., whose property also adjoins the waterway.
Owen Simpson, P.O.Box 26 Hagerman, ID 83332 (208)837-6230 Michael MacButch, P.O.Box 1723 Pocatello, ID 83201 (208)232-4710
Jack Simpson, P.O.Box 336 Ketchum, ID 83340 (208)726-3249 Loren Hart, P.O.Box 2171, Ketchum, ID (208)726-8869
Patsy Gilday, P.O.Box 2604, SunValley, ID (208)726-8837

11. LEGAL OWNER
IF OTHER THAN APPLICANT Jack Simpson
Address P.O.Box 336
City, State, Ketchum, ID 83340
Zip Code Ketchum, ID 83340
Area Area
Phone: Work () Home (208)726-3249

12. List other applications, approvals or certifications from other Federal, interstate, state, or local agencies for any structures, constructions, discharges, deposits, or other activities described in this application.

Issuing Agency	Type Approval	Identification No.	Date of Application	Date of Approval
<u>Blaine Co.</u>	<u>pending</u>		<u>10-9-87</u>	<u>pending</u>

13. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein? YES NO (If "Yes" explain)

14. Preparation of drawings. One set of original or good quality reproducible drawings must be attached to this application. Drawings attached to Department of the Army permit applications must be no larger than 8 1/2 x 11 inches in size. See the instruction pamphlet for instructions and a checklist for completing the drawings.

15. Remarks or additional information:

16. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. I hereby grant to the agencies to which this application is made, the right to come upon the above-described location to inspect the proposed or completed work.

Date 10/26/87 Signature of Applicant (Required) Michael W Simpson

The application must be signed by the applicant. If an authorized agent is to be designated, Item 4 and the following information should be completed.

I hereby designate GEOMAX P.C. to act as my agent in matters related to this permit application. I understand that if a Federal permit is issued, I must sign the permit.

Date 10/9/87 Signature of Authorized Agency (if applicable) Michael A. Loverton Signature of Applicant (if applicable)

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both. Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.

DO NOT SEND PROCESSING FEE WITH APPLICATION

BRIEF IMPACT STATEMENT

Attachment to Blaine County STREAM ALTERATION PERMIT APPLICATION and JOINT PERMIT APPLICATION for USACOE, IDWR, and IDL

The following Impact Statement addresses the item suggested in the Blaine County Stream Alteration Permit Application.

PROBLEMS and SOLUTIONS

The problems that have prompted the proposed instream activities shown on the accompanying plans is directly related to an existing water diversion structure and bank erosion.

Presently, the operators of the Warm Springs Golf Course and Restaurant divert water from Warm Springs Creek to ponds near the restaurant. This is accomplished by an existing drop structure located as shown on the plans. This structure is constructed of cabled logs, some rocks and steel fence posts supporting plywood sheets. Due to the method of construction of the drop the operators are required to continually maintain the structure. The maintenance activities usually involve substantial instream work that disrupts the channel bottom.

Due to the shape of the existing structure, water concentrates along the south end of the structure during periods of high flow. This flow regime has resulted in excessive erosion along the south bank which has prompted a rather unsuccessful rip rap effort.

Structure 1 will be constructed at nearly the same location as the existing structure. This new structure is designed to eliminate the continual maintenance and frequent instream disturbance. This structure will also help to control erosion upstream from the structure.

The abutments for the bridge that is located approximately 210 feet upstream from Structure 1 are currently being undercut, and the retaining wall along the north bank between the structure and bridge is showing signs of being stressed. The proposed drop structure will help reduce the erosive action that threatens the foundation of the bridge and retaining wall by slowing the water velocity and slightly raising the elevation of the stream floor. The plans show the relative elevations of the ground surface and proposed structures.

Property downstream from Structure 1 will be benefited by its installation because the stream thread will be directed away from the south bank, and some gravel originating upstream will be captured behind the structure.

Directing the main flow away from the south bank will help to preserve the large cottonwood trees, (see plans). These trees are an asset to the Golf Course and riparian habitat. However, the trees that are dying of old age or disease must be cut while leaving the stump. This method of tree management will preserve the banks and allow new growth to establish.

Trapping gravel behind the structure reduces the downstream migration of gravel that has the potential of filling the channel which reduces the carrying capacity of the stream. Gravel that is not allowed to migrate benefits not only Warm Springs Creek but the Big Wood River as well.

Proposed Structure 2 is designed to reduce bank erosion upstream, direct flows toward the south side of the channel, and further reduce downstream gravel migration.

This structure will raise the base elevation of the stream just enough to stabilize the foundation under the cottonwood trees on the south bank, and the rip rap on the north bank.

Directing the flow toward the south side of the channel will take some erosive pressure off of the north bank and provide a better flow alignment to the foot bridge, (see plans).

The advantages of capturing gravel for Structure 2 is identical to Structure 1.

In general, the structures proposed provide stability to the stream system by expending excess energy as the water flows over the structures. The structures also provide an increase in aquatic habitat by providing holding water in the pools created upstream, and hiding/security cover among the large rocks and along stable vegetated banks.

POTENTIAL IMPACTS IF NOT COMPLETED

If this project is not completed the stream as well as property up and downstream will suffer because of the following reasons:

1. The existing diversion structure will probably be maintained much the same way as it has for the past number of years. Due to the nature of the existing structure, rip rap has needed to be installed periodically. This activity will probably continue if a reliable diversion drop structure is not installed.

2. The bridge abutments will continue to be undermined. This erosion will prompt the bridge owner to install rip rap or some other type of protection to stabilize it.
3. The retaining wall along the north bank between proposed Structure 1 and the bridge upstream may need some type of revetment to stabilize it if the foundation is washed away. The existing condition of the retaining wall is largely due to excessive lateral earth pressures. However, if the foundation of the wall is weakened, the wall will probably be stressed to failure.
4. The trees, if not properly managed, will fall into the stream exposing a raw unsupported bank. If this occurs rip rap will probably be installed and the products of erosion will cause other problems downstream.
5. The rip rap that would be installed if the drop structures are not will cause an increase in channel bottom erosion. Similar to item 4 above, the products of this erosion will cause problems downstream to Warm Springs Creek and the Big Wood River.

OTHER POSSIBLE SOLUTIONS ?

At this time we do not see any other solution to the problem that addresses the needs of the property owner and the stream. However, other suggested solutions would be analyzed and incorporated if they were found to be feasible.

POTENTIAL NEGATIVE IMPACTS

The only impacts that may be construed as negative is the potential of a slight increase in sheet flooding during very high water events. However, the topography of the land shows that during overbank flows in the vicinity of this project, much of the water not contained in the channel will flow slowly over the golf course.

This type of overbank flow has more benefits than commonly thought. Some of the benefits are:

Off channel storage during high flows. This moderates the runoff peaks that would otherwise be felt somewhere else downstream.

In-channel flows are reduced which reduces the available energy that would otherwise increase bank and channel erosion.

As the high flow event recedes, a thin layer of fine silt is deposited in the areas that had the sheet flooding. This silt acts as a fertilizer and quickly becomes part of the soil profile.

CONCLUSION

The structures proposed are not intended to be a "cure all". When ever man manipulates a natural system there is some risk involved. However, these risks are minimized when one attempts to work with the stream instead of against it. The proposed structures explained above have been used successfully throughout Montana, and other western states and should work very well on Warm Springs Creek.

October 9, 1987

PROFESSIONAL ENGINEERS & SURVEYORS

Dean Hilliard
Chief Regulatory Branch
Army Corps of Engineers
City County Airport
Building 602
Walla Walla, WA 99362

622 SOUTH SIXTH AVENUE • BOZEMAN, MONTANA • 59715
TELEPHONE: (406) 586-0730 (406) 586-1011

RE: Warm Springs Creek Stabilization and Diversion Improvements,
Blaine Co. Idaho.

Dear Mr. Hilliard:

Enclosed for your review and action is a permit application and engineering plans for the referenced project. The enclosed information packet includes the following:

1. One set of 24"x36" blue-line plans.
2. One 8 1/2"x11" copy of the site plan (Albanene).
3. One 8 1/2"x11" copy of the Vicinity Map (Albanene).
4. One 8 1/2"x11" copy of Drop Structure/Sill details (Albanene).

The project consists of refurbishing an existing drop structure and installing an additional drop structure for stabilization.

We hope to improve the existing drop structure with Structure #1 and install a fixed area submerged orifice headgate structure in the ditch this fall. Structure #2 could conceivably wait until early next year.

I understand that improving an existing structure requires a Nationwide Permit. Is it possible to obtain this permit and construct Structure #1 and the headgate this fall? If so, I hope that the enclosed material will be sufficient to secure such a permit. If not, would it be possible to have this project reviewed with a 30-day review period? Also, please let me know the procedures for obtaining a Nationwide Permit if the enclosed material will not work.

I am sending full-sized plans to the following:

John Olson, ACCE, Bosie
Ervin Ballcu, DOWR, Bosie
Ed Nighbor, Blaine County Planner, Hailey
Linda Haavik, Ketchum City Planner, Ketchum
Dept. of Lands, Bosie
Michael Simpson, Ketchum

Dean Hilliard
October 9, 1987
Page Two

I hope that the enclosed material will ease your burden. If I have left anything out or if you have questions, please let me know.

Best regards,

GEOMAX P.C.



Mike Leaverton, PE
Vice President

Enclosure

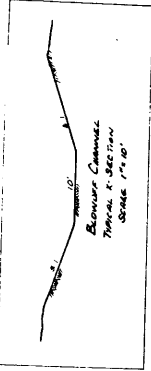
pc: John Olson
Ed Nigbor
Ervin Ballou
Linda Haavik ✓
Dept. of Lands
Michael Simpson

NORTH



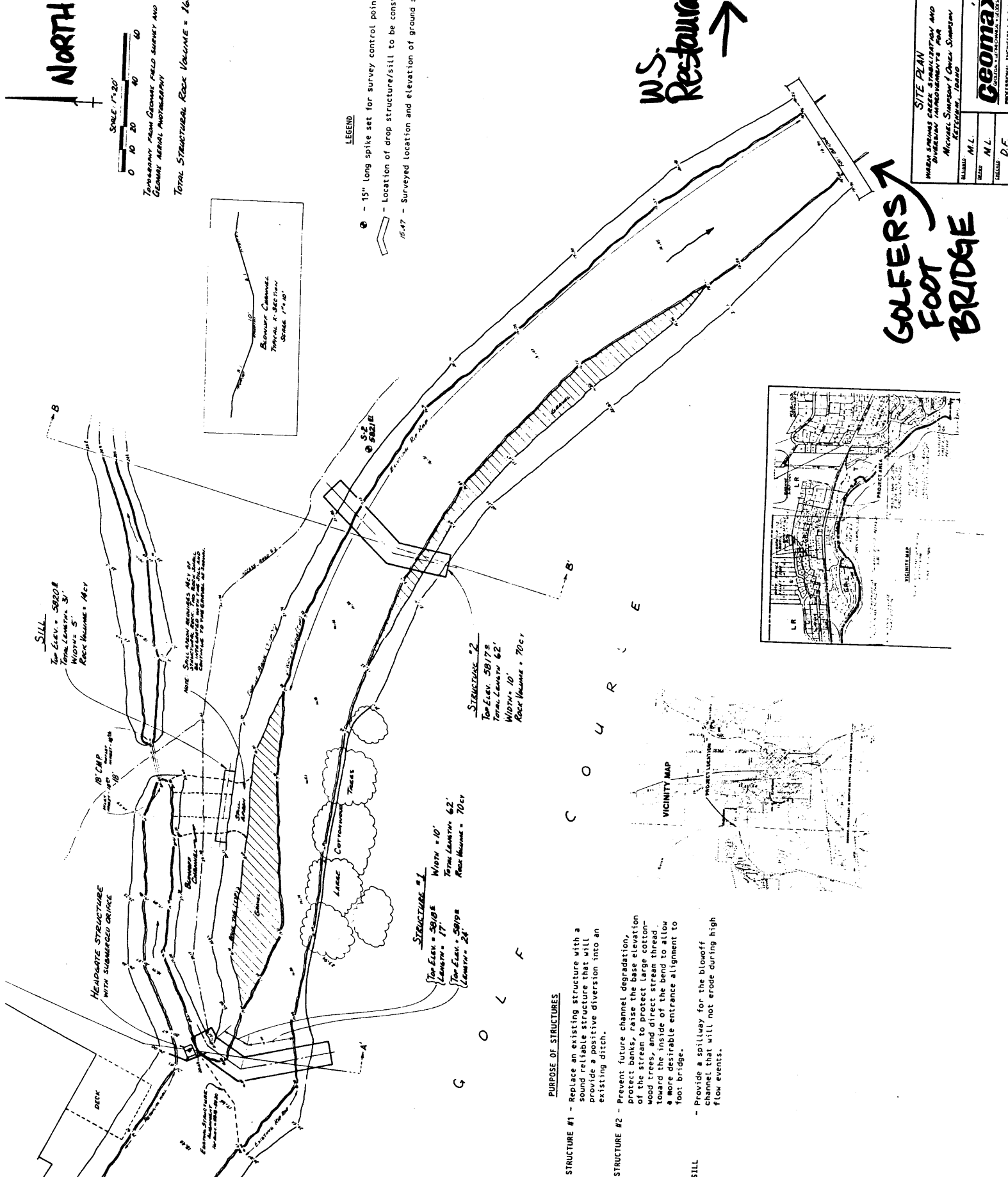
TEMPORARY FROM GEOMETRY FIELD SURVEY AND
CURRENT AERIAL PHOTOGRAPHY

TOTAL STRUCTURAL ROCK VOLUME = 168 C



LEGEND

- ① - 15" long spike set for survey control point
- ▭ - Location of drop structure/sill to be constructed
- 1:5.47 - Surveyed location and elevation of ground surface



W.S. Restaurant →

GOLFERS FOOT BRIDGE

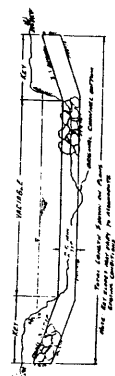
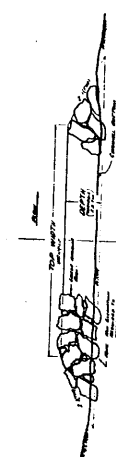
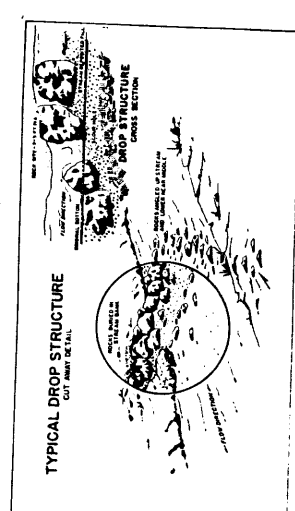
SITE PLAN
WATERWAYS CHANNEL STABILIZATION AND
IMPROVEMENTS FOR
MICHAEL SWANSON / Chess, Simpson &
ASSOCIATES, INC. 2008

DATE: M.L.
DRAWN: M.L.
CHECKED: D.F.

GEOMAX
CONSULTANTS INC.

PURPOSE OF STRUCTURES

- STRUCTURE #1** - Replace an existing structure with a sound reliable structure that will provide a positive diversion into an existing ditch.
- STRUCTURE #2** - Prevent future channel degradation, protect banks, raise the base elevation of the stream to protect large cottonwood trees, and direct stream thread toward the inside of the bend to allow a more desirable entrance alignment to foot bridge.
- SILL** - Provide a spillway for the blowoff channel that will not erode during high flow events.



GENERAL NOTES

- Construction sequence shall be the following:
 1. Install precast headgate structure in ditch
 2. Construct structure #2
 3. Construct structure #1
 4. Construct blowoff channel sill
- Structural rock volumes shall be measured from low water mark toward bank. Keys shall be 15' long or as directed by field engineer.
- The total estimated volume of structural rock shall be stockpiled in the vicinity of the structures prior to instream placement.
- Structural rock shall be approved by the engineer at the quarry prior to delivery.

*Simpson
drop structures*



PROFESSIONAL ENGINEERS & SURVEYORS

622 SOUTH SIXTH AVENUE • BOZEMAN, MONTANA • 59715
TELEPHONE: (406) 586-0730 (406) 586-1011

January 27, 1988

Larry Basich, PE
Federal Emergency Management Agency
Federal Regional Center
130 228th Street SW
Bothell, WA 98021-9796

Dear Larry:

As per your request and my gratitude, I am enclosing the Big Wood River HEC II input listing for the reach between East Fork and Eagle Creek. Within this reach we are concerned about the subreach from the Hulen Meadows bridge to the Lake Creek Trail Head foot bridge (see plan sheets 3 & 4).

As you know I have been having difficulty plotting the HEC II cross-sections on our plan sheets. Your help in getting me straightened out is greatly appreciated.

Pertaining to the Big Wood, I have also enclosed copies of the study profile sheets. I have marked on them where I think the cross-sections are. Likewise, I have marked on the input listing which cross-sections are plotted on the profile. I am just having trouble locating the sections relative to our drop structure sections.

The plan sheets that are enclosed are not as-built plans. The structures shown on the main channel north of the Hulen bridge are very close to their actual position. However, those structures shown on training channel are not correct. We changed the alignment of the training channel and have not prepared the as-built drawings as yet.

If it is possible for you to plot the position of the HEC II cross-sections on our plan sheets and return them to me I will be able to input our data and run the profiles.

I have also enclosed the profile for Warm Springs Creek which was generated using ACDE input data with our data (with and without drop structures). You will be able to compare our profile with that prepared for the insurance study. I am very interested in hearing your comments on the Warm Springs evaluation.

Larry, thanks again for helping us out. I was about to pull my hair out. Let me know if you have any questions or need additional information.

Best regards,

GEOMAX P.C.

Mike Leaverton
Mike Leaverton, PE

enclosures

pc: Michael Simpson
Linda Haavik

Date : 02/04/88

Permit Actions for the month of January
33 CFR 325.2 (A)(8), requires that the District Engineer publish each month a list of permit actions for the previous month and furnish that list to those persons who received the corresponding public notice. Accordingly, the following is a list of those permits issued, denied, or canceled by the Walla Walla District for the month of January. Environmental assessments and statement of findings are available upon written request and, where applicable, upon payment of administrative fees.

Permit #	Water Way	State	Date	Final Action	Applicant

OYC4003180	SMITH CREEK	Idaho	01/06/88	Permit	IDAHO NATURAL ENERGY, INCORPORATED
Work : CONCRETE AND ROCK FOR DIVERSION STRUCTURE					

OYC4003210	SPIRIT LAKE	Idaho	01/07/88	Permit	PINKHAM, H.W.
Work : PLACE 24 CUBIC YARDS OF SAND IN WETLAND AREA					

OYC4003216	BEAR RIVER	Idaho	01/06/88	Permit	BEAR LAKE COUNTY
Work : PLACE 3000 CUBIC YARDS OF PITRUN FILL AND 140 CUBIC YARDS OF RIPRAP IN THERIVER AND ADJACENT WETLANDS					

OYC4003220	BIG WOOD RIVER EF	Idaho	01/06/88	Permit	LYNN, ROBERT
Work : CONSTRUCT TWO OVERFLOW STRUCTURES					

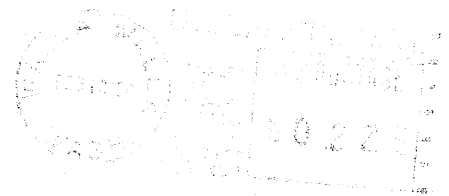
OYC4003222	WARM SPRINGS CREEK	Idaho	01/07/88	Permit	SIMPSON, MICHAEL
Work : REFURBISH EXISTING DROP STRUCTURE AND INSTALL ADDITIONAL STRUCTURE					

OYC4003227	BORDEN LAKE	Idaho	01/15/88	Permit	IDAHO DEPARTMENT OF FISH AND GAME
Work : DISCHARGE OF DREDGED MATERIAL IN BORDEN LAKE, A WETLAND ADJACENT TO THE SNAKE RIVER					

OYC4003231	BOULDER CREEK	Idaho	01/19/88	Permit	UMBACH, CUTLER
Work : CONSTRUCT FOUR PONDS FOR FISH AND WILDLIFE HABITAT					

DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT, CORPS OF ENGINEERS
BUILDING 602, CITY-COUNTY AIRPORT
WALLA WALLA, WASHINGTON 99362-9265

NPWOP



~~City of Ketchum
City Hall
Ketchum, ID 83340~~

Linda

