INFORMED CONSENT

This form must be printed out, signed, and returned to the Instructor before starting the course

INTRODUCTION:

It is important that student participants in the UC Berkeley Advanced Summer Field Course understand the risks they voluntarily incur when they consent to participate in field-course activities. Students should be aware of the physical demands and stresses that usually accompany activities of this nature. Injuries can and do occur. It is impossible to guarantee the complete safety of all participants, but it is imperative that all student participants be aware of the risks they face, and act responsibly at all times.

STUDENT RESPONSIBILITIES:

Each student bears the responsibility to follow normal field-safety precautions, to follow specific instructions, and to use common sense in all field situations, around the base camp in Wise River, and while in vehicles.

While in the field, no student is permitted to work alone. Each student in the field will have one or more field partners. No student may allow a partner to move out of sight or hearing; thus, students must not "split up" the field work if that requires moving apart.

No student may put him/herself in an unsafe situation. If you find yourself in a situation that you feel is unsafe, stop immediately and call for help.

SPECIFIC RISKS* (this list does not cover all possible risks):

NOTE: If at any time you feel uncomfortable or insecure in a field situation, stop what you are doing immediately and inform the instructor

a.  Driving or riding in a field-course vehicle: This is the most dangerous activity in which you will participate. Everyone in a vehicle has responsibilities. The driver, the navigator sitting in the front seat, and all other passengers who will assist the driver at all times in backing up, parking safely, closing windows, and locking all the doors upon leaving the vehicle.

One responsibility of drivers and riders bears repetition here: No person riding in or driving a UC Berkeley field-course vehicle may consume an alcoholic
beverage or be in possession of an open container of alcoholic beverage. No person may operate a UC Berkeley vehicle if he/she has consumed any alcohol that day.

b. **Working in the field:** Use hammers correctly: the pointed end is used for prying, not striking. Do not strike one hammer with another. Use a chisel to break rocks apart. Shield eyes from rock chips while striking a rock with a hammer. **Wear safety glasses when taking rock samples.**

c. **Falling rock(s):** When working on slopes, do not work directly above or below another person; don't climb or work on or below rock overhangs.

d. **Falls:** Walk carefully along rock faces, giving surface conditions your full attention. Do not jump to land on a point if you are not sure of its stability. Do not hesitate to use hands or butt as well as feet to maintain contact with an unstable surface.

e. **Wild and domestic animals:** Bears, moose, elk, deer, mountain lions, and cattle, especially bulls, may behave unpredictably and thus can pose a risk. Keep away from large animals. If you encounter a large wild or domestic animal at close range, stop, stand tall, and slowly back away (never run). Wolves, coyotes, foxes, skunks, raccoons, badgers, squirrels, and other smaller animals are usually afraid of humans, but may attack under certain circumstances, especially if they feel cornered. Leave wild animals alone, especially if they appear tame; when a wild animal fails to avoid human contact there is a good chance that the animal is suffering from rabies or some other disease that has impaired its judgment. Any person who suffers a bite from a wild animal, however minor the injury, should seek medical help as soon as possible.

f. **Snakes:** Snakes are timid creatures that avoid contact with humans whenever possible. Snakes strike at humans only when startled or frightened. Rattlesnakes may or may not rattle. In snake country (anywhere below ~9,000'), always keep an eye out for snakes. Watch where you put your hands and feet. Don't step over a log or boulder without inspecting the ground on the other side. When climbing slopes or collecting rock samples, don't put a hand or a foot into a crevice or hollow, or onto a ledge, without checking there first for snakes (don't hold your face too close while checking). Use your rock hammer to turn over rocks, turning them toward you to place the rock between you and whatever might lie coiled under that rock. In snake country it is best to wear long, loose-fitting trousers and boots that cover your ankles. Never try to capture or kill a snake. If you suddenly encounter a snake that you failed to avoid, stop. Make no sudden motions. Back slowly out of range of its strike (even when tightly coiled, no snake can strike farther than its body length, which is \( \leq 6' \) in Montana.

If a snake bites you, don't panic. Emergency treatment of snakebite in the field is no longer recommended, especially if the victim is within a few hours of medical
help. If possible, without endangering other people, make an identification of the
snake without collecting it. If you think it may have been a rattler, bring the victim
immediately to medical facilities (Saint James Hospital in Butte). Carry the victim
or have him/her walk slowly without becoming overheated. Do not administer
alcohol. Do not apply ice to the site of the bite. Most healthy adults recover fully
and rapidly from rattler bites.

g. *Insects and other arthropods:*

1. The bites of mosquitoes, flies, no-see-ums and most other flying
blood-sucking insects can be annoying but normally do not represent a
serious health threat for most people. Insect repellent is effective against
flying insects. Some people find that an antihistamine reduces adverse
reactions to insect stings.

2. The bites of bees, wasps, spiders, and ants are more painful but,
again, are normally not health threats to most people. Some people are
highly sensitive to such bites, and may develop *anaphylaxis*, a potentially
fatal systemic reaction. Anaphylaxis is marked by the appearance of
hives, labored breathing, and weakness. People who know they are
highly sensitive to such bites are advised to carry a bee-sting kit; if you are
such a person, you must make your condition known to the field-course
instructors and to each of your field partners. Any person who shows an
allergic reaction to the bite of any insect should be brought to a medical
facility without delay.

3. Scorpion stings usually are no more serious than bee stings.
Scorpions are found under rocks, under leaves, or in soft sand.

4. Ticks are flat-hard-bodied 8-legged arthropods that range in size
from a pinhead to a pencil eraser. Ticks in Montana and Wyoming can
transmit Rocky Mountain Spotted Fever and/or Lyme Disease. If
diagnosed early, both of these diseases can be treated effectively with
antibiotics.

Ticks feed on the blood of mammalian, reptilian, or avian hosts. Most
ticks are highly specialized to specific hosts, but a few generalists
parasitize humans. Ticks are brushed off of foliage onto passing animals,
and crawl over the host animal seeking a secure place to attach to the
host while extracting a blood meal. Ticks may crawl around the host
seeking such a site for as long as 24 hours, so you have plenty of time to
get them off your body before they dig in. Long trousers and long-sleeved
shirts help keep ticks off your body, as does the liberal application of
insect repellent to boots, tops of socks, and cuffs of pants and
shirtsleeves. Conduct a personal check of your body and clothing each
evening when you return from the field; kill ticks by crushing them with a
hard object. Check especially along hairlines and along waistbands, or wherever clothing has been held close to your body. If an embedded tick is discovered, remove it by drawing it gently backward with tweezers. If you can, save the tick for possible later identification. If you break off the head of a tick in an attempt to remove it, ask a physician to remove the head.

If you know you have been bitten by a tick, watch the site for signs of inflammation, and remember that you were bitten by a tick if you subsequently develop a high fever, a headache, chills, or a persistent rash.

i. **Acute Mountain Sickness:** Acute Mountain Sickness usually occurs above 8,000', but may occur at lower elevations in sensitive people. Symptoms include headache, nausea, dizziness, fatigue, shortness of breath, loss of appetite, and trouble sleeping. Symptoms usually develop 12 to 36 hours after reaching high elevation. Victims should avoid strenuous exertion but should exercise lightly to promote acclimatization. **Victims should drink plenty of liquids and avoid alcohol, tobacco, and sedatives.**

If symptoms persist or reduce your capacity to work in the field, describe your condition to an instructor in the field course.

j. **Lightning:** The High Plains and the Rocky Mountains are frequently visited by violent thunderstorms during the summer months. While the high winds associated with these storms, the heavy rain (including hail), and the potential for local flooding pose identifiable risks, the most serious risk associated with such a storm is exposure to lightning.

Lightning is a discharge of electrical current from a negative anode to a charged cloud, a positive cathode, which has acquired its charge as a result of atmospheric friction. Lightning appears to travel from a cloud to the ground, but that is because the pathway of ionized atmospheric atoms (primarily nitrogen) that develops through the atmosphere is illuminated from the top down, and is supported by a potential of about a million volts. The anode may be another cloud or the Earth. Cloud-to-cloud lightning poses no risk to the field geologist, but Earth-to-cloud lightning can be lethal to a person who is in a position to form part of the current pathway. Unfortunately, there is no way to predict whether a given charged cloud will receive electrons from another cloud or from the Earth.

Lightning is most likely to flow from the Earth to a charged cloud from a position on the Earth closest to that cloud, or along a pathway that represents an efficient conductor.
To minimize the risk of serving as part of the current pathway in a lightning discharge, the field geologist should observe certain precautions when in or near a thunderstorm:

If an electrical storm catches you in the open, or you see an electrical storm approaching, take immediate steps to make yourself an unlikely conductor:

i. Get off high ground, below the tree line, and away from isolated tall trees (do not take shelter from the rain under an isolated tall tree!);

ii. If you are trapped in the open above tree line, crouch in a depression (don't lie down; you want to minimize your contact with the Earth - 2 feet in contact with the Earth is plenty);

iii. Stay away from metal objects, such as pack frames, golf clubs, aluminum fishing rods, tent poles, camera tripods, surveying equipment, etc.;

iv. If you are in a boat on a lake or stream, or swimming, go directly to the nearest point on shore;

v. Don't handle open containers of flammable liquids;

vi. If you take shelter under a rock overhang or in a cave, move under the rock as far as you can; lightning has been known to pass through the body of a person standing in the mouth of a cave.

If you are with a person rendered unconscious by a lightning discharge, treat that person like any other accident victim. Administer CPR if necessary, and get the victim to a hospital quickly; people struck by lightning have been known to recover completely.

Fire is a constant hazard. It is your personal responsibility to take all precautions necessary to not start a fire while doing field work or around the base camp. Sage brush as well as trees are very flammable. Smoking is not permitted on EBMUD lands nor within the base camp bunkhouse or cabin. If you smoke, please do so around the camp fire ring and extinguish all smoking materials.

By signing this form I acknowledge that I understand its contents, and that I accept my responsibilities as a student in this course and the risks that I incur by participating in the course in all regions where we go: the field, base camp and while in vehicles.
I release from all liability George and Mary Jane Brimhall and their heirs from all accidents on their property in Wise River, Montana while enrolled in the EPS 118 course.
Title Holders to Property: George H Brimhall and Mary Jane Brimhall
Location: Wise River, Beaverhead County, Montana T1S R11W Sections 17 (eastern 2/3) and Section 18 Parcel “C”
Wise River MT 59762-0014
Address: 41555 Pioneer Mountains Scenic By-Way
Location: 45.742397 N, 112.996285 W

Student’s Name Printed ________________________________

___________________________            ___________________
Student’s signature         date

___________________________  ___________________  ______
George Brimhall     Mary Jane Brimhall     Date