

# What is Adventure Racing (background)

- Exponential growth.
- Just completing a race is often considered a victory “getting to the starting line is the hardest part”
- Challenging to both the mind and the body
- Crossover for cyclists, runners, water sports enthusiasts & the mature thrill seeker
- Team sport, teams of 2-5 members
- Navigation based
- Year round including winter
- First team to get all members across the finish line together
- The disciplines can also vary from race to race and by organizer (physical vs. mental)
- 2 hours to 10 days and often cover over 100 miles

# What is Adventure Racing (background)

- Racing is nonstop (some could include dark zones)
- Teams must stay together
- Competitors are on a need-to-know only basis
- Most are internet bases
- Most have a pre-race meeting
- Each team must use strategy to determine the best route, equipment, food, and pace
- Team must carry specified gear
- Communication devices
- Supported & unsupported races
- Some require certifications
- Transition Areas (TA's)
- Drop out rates can vary from 5% to 95%

# What is Adventure Racing (race disciplines)

- Trekking or trail running
- Mountain/road biking
- In-line skating
- Scooters
- Navigation
- Equestrian
- Water crossing (swimming)
- Climbing
- Special test (mystery events)
- Caving (spelunking)
- Fixed ropes
- Paddling (canoeing, kayaking, white water)
- Orienteering

# What is Adventure Racing (types of race)

- Expedition (3 to 10 days)
- Weekend races (24hr to 36hr)
- Sprints (under 24 hours (some as short as 3hrs)
- Urban (sprints to 24hrs)
- Rogaines (8hr to 24hr)

# AR Gear

## **TEAM EQUIPMENT (gear to be carried by one member of each team for the ENTIRE event)**

- Waterproof map case
- Team cell phone (redundantly sealed in watertight bag—number must match the one provided in the application)
- 24” elastic cord with hooks (bunji type—2 per team)
- First aid kit (watertight). Contents to include the following as a minimum:
  - Electrolyte replacement salts, 24 tablets or equivalent (Hammer Nutrition Endurolytes or equivalent)
  - (1) Closure bandage (butterfly)
  - (1) Roll adhesive tape
  - (10) Adhesive strips (Band-Aids)
  - (1) Moleskin, 12 square inches
  - (1) 2"x5" gauze roll
  - (1) Antibacterial ointment or cream
  - Scissors
  - (1) 2” elastic ace bandage
  - (10) Anti-inflammatory tablets (Ibuprofen, etc.)
  - Sunscreen (15 SPF min.)
  - Lip balm

# AR Gear

## **INDIVIDUAL MANDATORY EQUIPMENT (gear to be carried by each member of the team for the ENTIRE event)**

- Hydration system 70 oz. min.
- Knife with fixed or locking blade
- Whistle
- Compass
- Emergency blanket
- Backpack or fanny pack
- Eye protection

# Training

- Seeking professional help
- Friends knowledgeable in any of the disciplines
- Experienced racers
- On-line
- Potential teammates
- Networking with other racers (message boards & newsgroups)
- SMAC training days (misery loves company)
- SMAC Clinics
- SMOC Southern Michigan Orienteering Club [www.Michigan.org](http://www.Michigan.org)
- Clubs like MMBA
- Cross training
- Keep it fun

# Nutrition

- Talk with other racers
- Hammer nutrition
- The longer the race the more regular food should be eaten
- Test everything during training
- Carbohydrates the meal before the race
- Include carbohydrates with your sugars even for sub 3hr events
- The longer the race the more proteins will be needed
- Electrolytes / hydration
- Keep food easily available
- Eat every 00:30, drink every 00:15
- Getting sick
- Eating in the TA

# Navigation

- Topography
- Terminology
- Map types
- Map symbols
- AR navigation protocols
- Scales - declination - time vs. distance
- Pre-marked vs. UTM
- Orienteering

# Topography

## 3D Topography



## 2D Topography



# Topography

Topographical  
Base Map



Aerial Photo With  
Contour Lines



Aerial Photo

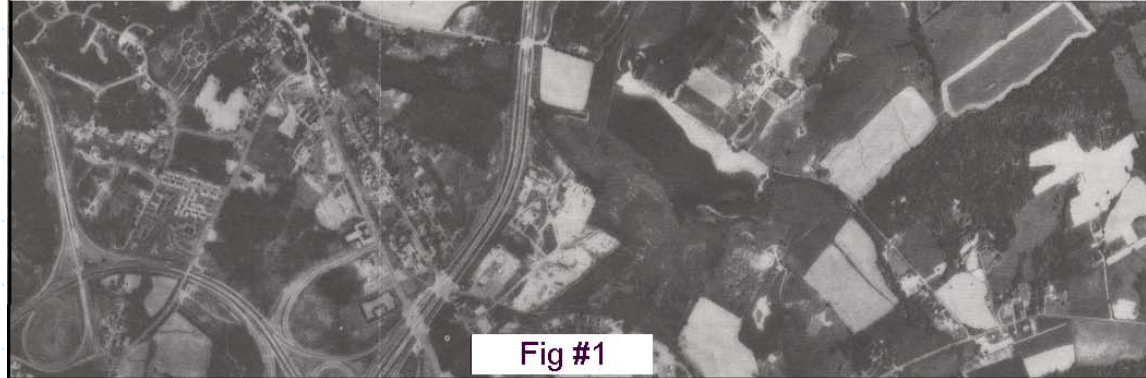
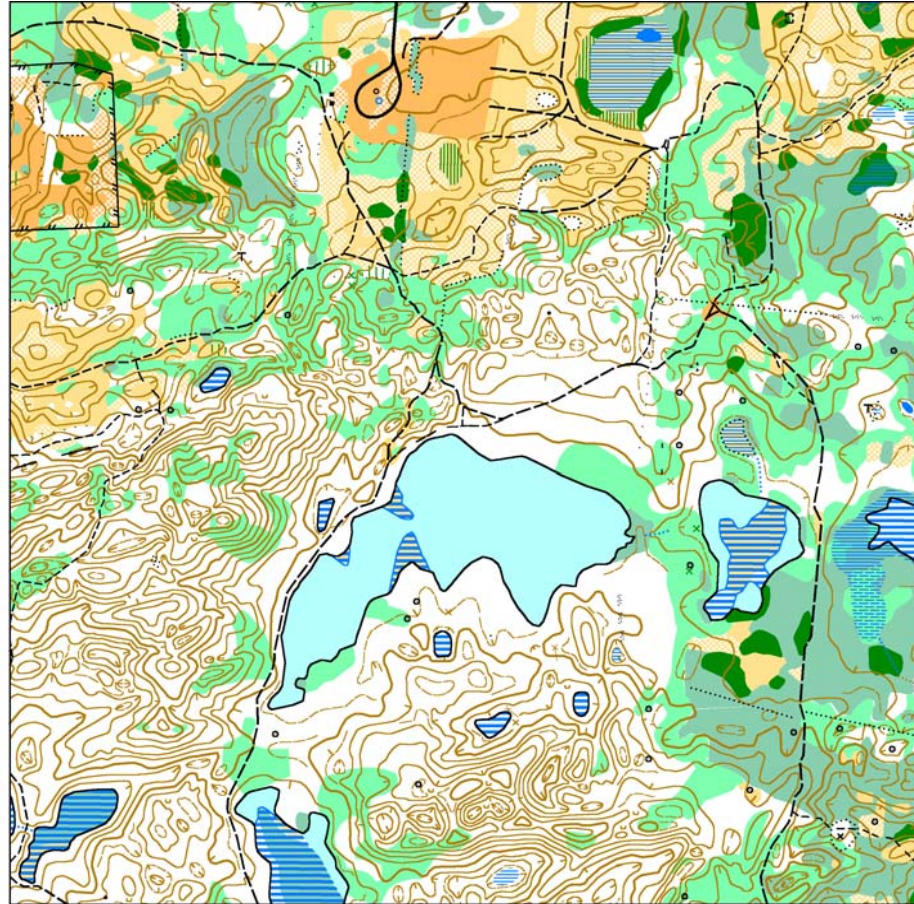


Fig #1

# Map Types

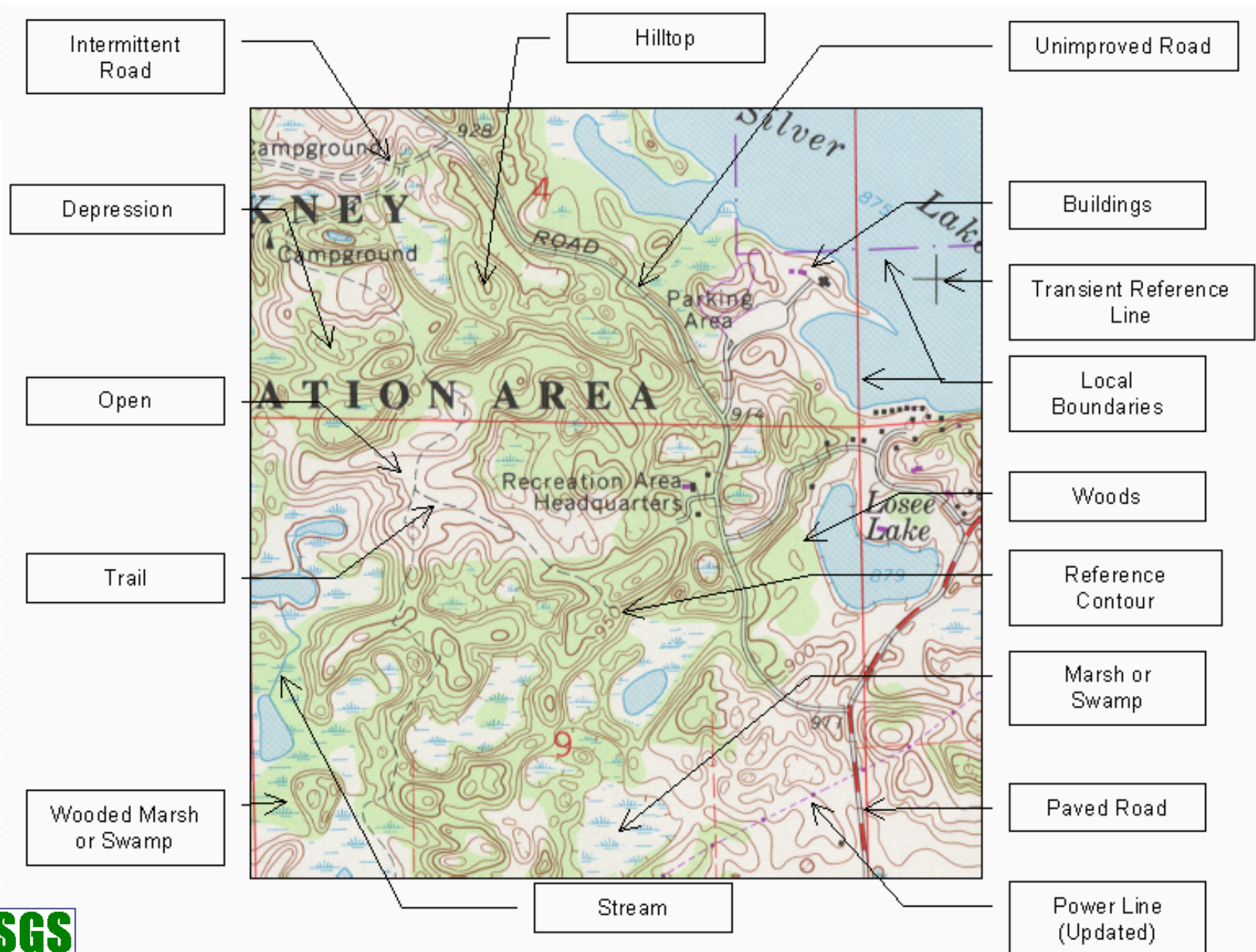
Orienteering Map



USGS Map

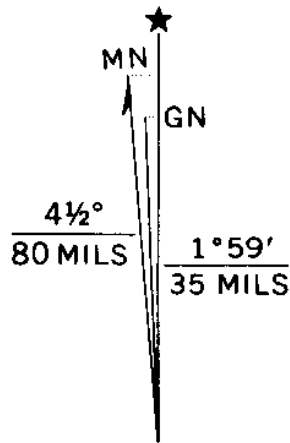
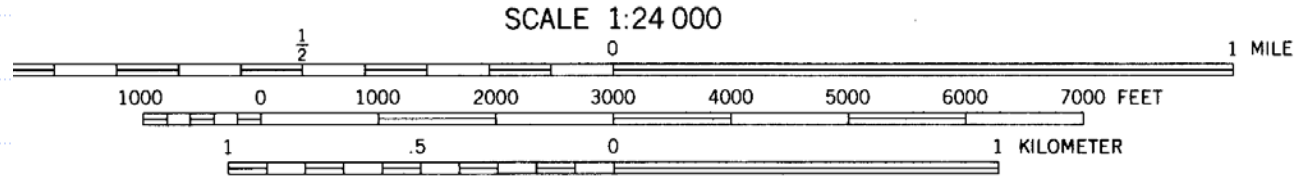


# USGS Symbols



# Scales - Declination - Time vs. Distance

- Scales
- Declination
- Speed / Time
- Seasonal
- Map Age



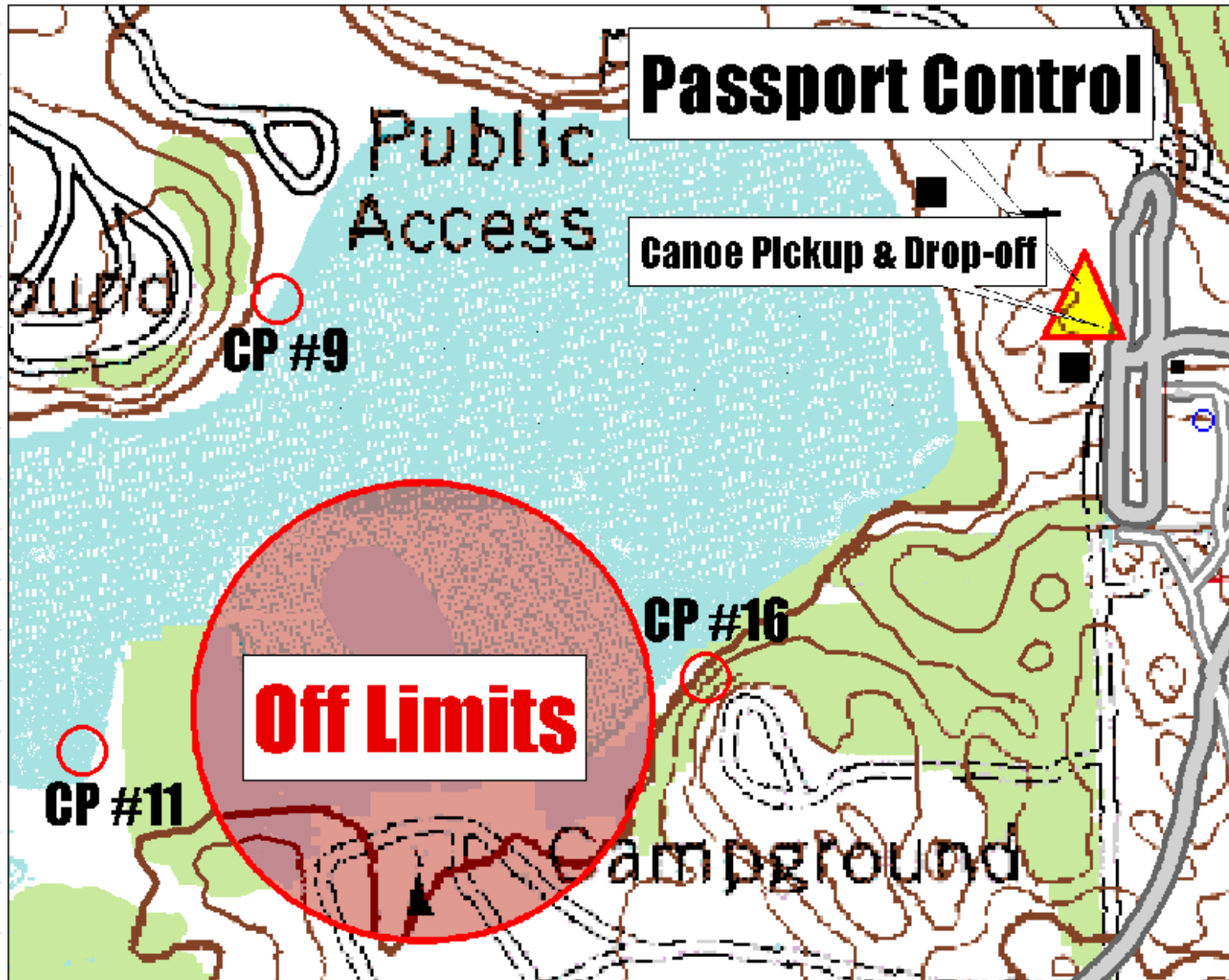
UTM GRID AND 1983 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Distance / Time For 1:24,000 Map				
	1.5	3	5	10
	SPEED	SPEED	SPEED	SPEED
<b>DISTANCE ON MAP (inches)</b>	<b>1.5 mph 40min /mile</b>	<b>3 mph 20min /mile</b>	<b>5 mph 12min /mile</b>	<b>10mph 6min /mile</b>
1	0.25	0.13	0.08	0.04
2	0.51	0.25	0.15	0.08
3	0.76	0.38	0.23	0.11
4	1.01	0.51	0.30	0.15
5	1.26	0.63	0.38	0.19
6	1.52	0.76	0.45	0.23
7	1.77	0.88	0.53	0.27
8	2.02	1.01	0.61	0.30
9	2.27	1.14	0.68	0.34
10	2.53	1.26	0.76	0.38
11	2.78	1.39	0.83	0.42
12	3.03	1.52	0.91	0.45

# AR Navigation Terminology

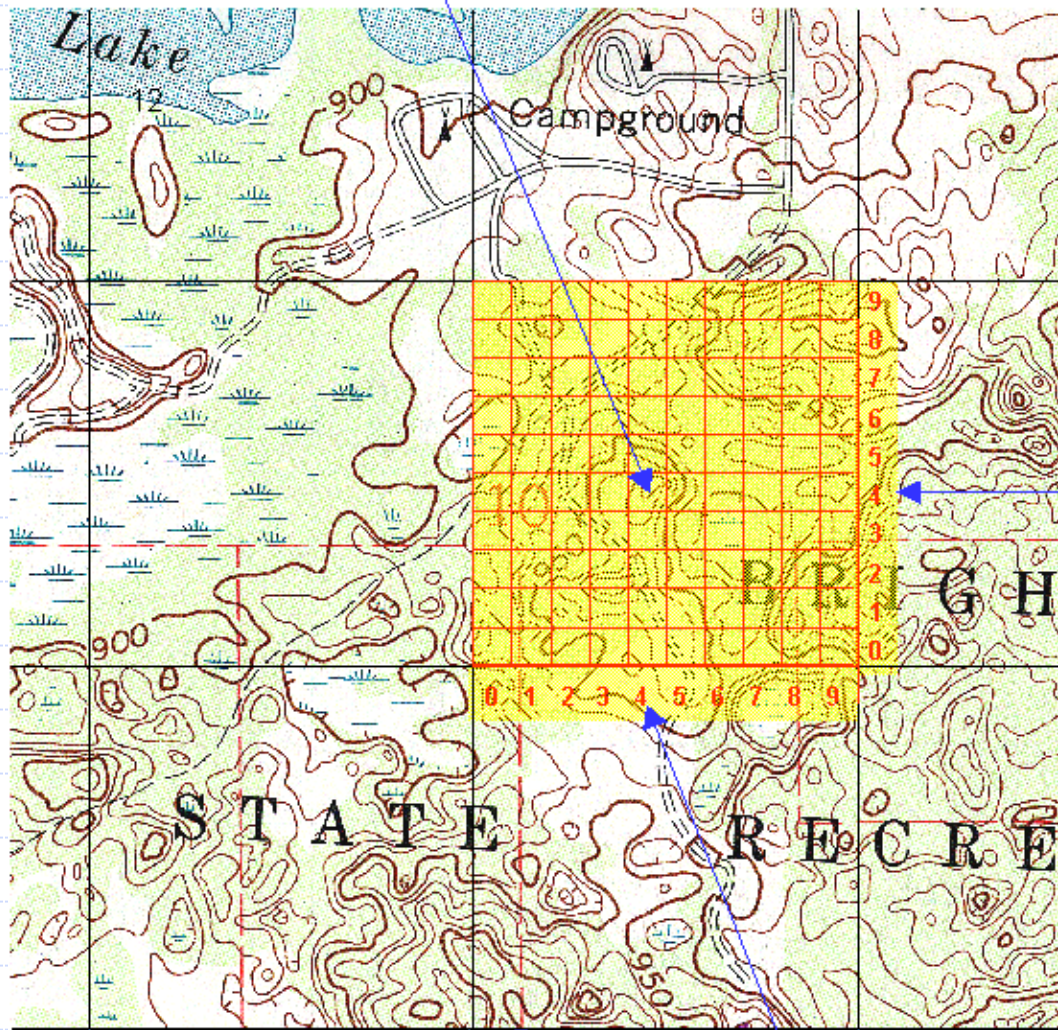
- CP
- TA
- Drops
- Combination areas
- Need to know only
- Map hand out
- Additional maps
- Off limit areas
- Text descriptions
- Specified routes
- Legends

# Pre-marked Maps



# UTM

CP# 5 (hilltop)



↑ Northing Coordinates ↓

258 259 260000m.E.

← Easting Coordinates →

4712  
471000m.N.

5945 1145

# Orienteering

- Clue Cards
- Controls
- Features
- Difficulty
- Punch Cards
- Unique Punches
- Score-O / Numerical
- Symbols

**Example For Row #1**

<b>Column A:</b>	The control number (in this case, the first control)
<b>Column B:</b>	The control code appearing at or near the flag (ZR)
<b>Column C:</b>	Which of several similar features (the middle one)
<b>Column D:</b>	The feature (boulder)
<b>Column E:</b>	Details of the feature's appearance
<b>Column F:</b>	Dimensions of the feature (2.5 m high)
<b>Column G:</b>	Location of the control marker (on top of)
<b>Column H:</b>	Other information

	Course	Length	Climb						
	A	B	C	D	E	F	G	H	
	●ORANGE			●4.5 km			●140m		
1	ZR		▲		2.5	⌈			
2	PP	≡	↗		6				
3	MM		○				○		
4	WH		⊖	⌒					
5	GC	↑	≡						
6	LM		≡	▲▲			○	⌈	
7	XT		≡	⊗			L		
8	GO		⌚	X					

○-----400m-----▶

Figure #1 (clue sheet) Note: items in blue are not show in a clue sheet

COLUMN D											
⊙	Well	⊗	Rootstock	)	Saddle	⌚	Spring	✱	Bare Rock	T	Tower
↗	Wall	≡	Earth Bank	⊖	Depression	↗	Bridge	▲	Rock Pillar	/	Road
◇	Rough Open Land	≡	Small Marsh	○	Special Feature	◇	Open Land	◇	Salt Lick	▲▲	Boulder Field
↗	Fence	≡	Firm Ground In Marsh	⌚	Waterhole	↙	Forest Conner	△	Single Tree	⌈	Spur
■	Building	⌚	Cave Opening	⊙	Lake	⊙	Clearing	⊙	Quarry	⌈	Dry Ditch
└	Hunters Stand	▲	Boulder Cluster	⌒	Terrace	⊗	Thicket	⌒	Re-entrant	•	Small Knoll
□	Ruin	≡	Rib	≡	Earth Wall / Dam	⌚	Stream	⌚	Pond	△	Tree Cluster
○	Hill or Knoll	▲	Boulder	∨	Pit	≡	Marsh	▲	Rock Pile	↑	Feed Rack
↗	Trail	⊙	Stony Ground	⌒	Small Depression	⌚	Wet Ditch	≡	Cliff	∧	Erosion Gully
➤	Vegetation Boundary	✱	Ant Hill	⊙	Trigger Marker	⊙	Burning Platform	⌚	Broken Ground		

Figure #3 (the feature)

# Team Dynamics

- Philosophy
- Captains
- Democracy vs. military structure
- Goals & expectations
- Positive behavior
- Negative behavior

# Philosophies

- No one way works with all teams
- Need to talk prior to forming a team
- Racing with friends
- Racing with spouses
- Military structure
- Democracy structure
- Male vs. female teammates

# Captains

- Two person teams
- 3 to 5 person teams
- Navigation
- Setting the pace
- Military structure
- Democracy structure

# Democracy vs. Military Structure

- Talk prior to the race
- Talk at critical junctions
- Navigation
- Members & responsibilities
- What happens when the team is split on what to do?

# Goals & Expectations

- Talk prior to the race
- Winning vs. finishing
- Injuries
- Dropping out

# Positive Behavior

- Support your teammates
- Support your navigator
- Support your captain
- Reminding teammates about eating & drinking
- It's all about the team not about yourself
- Lead by example
- Keep the entire team involved (nav. & tactics)
- Treat every member with respect
- Keep everyone talking

# Negative Behavior

- Racing like a SOLO
- Hidden agendas
- Putting blame on a teammate
- Venting - whining
- Focusing on difficulties
- Not listening to your teammates
- Looking at the entire course at once
- Competing with your own teammates
- Focusing on other teams
- Holding grudges
- Not being true to your team's goals
- Living in the past

# 10 Things Every Racer Should Know

**1. Know the difference between skill and endurance:** Possess the knowledge of technical and safety aspects involved in adventure racing, whether it is rope work, paddling, mountain biking or white water rafting. Don't go to a race thinking that your "natural athleticism" will carry you through. It won't! Equally important is to be physically trained for the long haul. While it is important to know the technical skills of each discipline, you must also be fit enough to carry them out for days at a time.

**2. Know your personal nutrition and hydration needs and preferences:** What you eat during a race is up to you. Practice your nutrition on your long training days and your overnights. Remember the fuel you put in will have an impact on your performance output. Stay hydrated. Once you're dehydrated it's an uphill battle the rest of the race.

# 10 Things Every Racer Should Know

**3. Know navigation skills:** Navigation is a key element that you cannot overlook. A small mistake will cost you dearly in a race. At least 2 people on your team must be good navigators. Ideally, everyone should have some navigation skills because, while too many opinions can be hazardous, sometimes the lead navigator needs to take a break or get a fresh perspective. Join your local orienteering club and figure out how to find your way out of the woods. Buy a quality compass. Buy USGS maps, Forestry Service maps, and trail maps of the race area and study them before the race. Take care of your maps and your race passport (your proof of what you've completed) during the race; you can end a race early with one wet map or a lost race passport.

# 10 Things Every Racer Should Know

**4. Know your teammates and communicate:** You don't have to be life-long buddies but it helps if you have at least done some training together. There are too many horror stories of teammates meeting the day before a race and finding out too late (like during a race) that they aren't compatible. By training with your teammates, you will also be better able to recognize signs of them needing help. Everybody has their down times during a race. Knowing how and when to give help as well as being comfortable enough to ask for help for yourself is crucial. Know what your teammates' goals are (ideally, they are yours as well). And constant communication before, during and after the race should keep everyone on the same page.

# 10 Things Every Racer Should Know

**5. Take care of your feet: What's your personal best method for preventing blisters?** How will you treat them once (not if) you get them? Change socks often, attend to hot spots as they appear and cut your toe nails. Break in your shoes and always have extra pairs.

**6. Know your own personal clothing and equipment needs:** AR is an equipment intensive and therefore expensive hobby. Expect to spend a lot on entry fees and equipment. Know what clothing keeps you the perfect temperature in all the weather conditions that you might encounter in a race. Also know what clothing pieces function the best for you. The last thing you want is to chaff. Find a pack that fits comfortably without pounding you to death when you run. Travel as light as possible; your required gear, food, water and clothing will be plenty of weight. Don't pack like you're camping.

# 10 Things Every Racer Should Know

7. Know how to pace yourself and race your own race. If you go out too fast, you'll fade real quick. But everyone's different, so figure it out! Also if you're thinking about whom you're competing against, you're concentrating on the wrong thing. You're racing against the course and your own mind and body. .

# 10 Things Every Racer Should Know

**8. Keep a positive attitude:** Your thoughts become your actions. Staying positive, having heart and never give up are key in AR. You might be physically and emotionally exhausted with days of racing ahead. You hear the nasty voice in your head telling you "You've had enough, you've already proven yourself. Time to quit." Disregarding this easy way out and moving forward, can sometimes be the hardest part of the race. Don't quit because you're tired. Realize you're going to get tired in a long race again and again. Talk to your teammates about how you're feeling. Help a teammate who's fighting to continue. You'll be glad you kept going.

# 10 Things Every Racer Should Know

**9. Time management:** Manage your training and racing time so you can keep your life in balance. Your training, your family, your friends, and your job all have their place in your life. We all turn into "race heads" the week before a big event. Just don't let AR take charge of your life. Be flexible and congenial while you train and while you race together. Respect your teammate's schedules and keep your commitments.

**10. Continually learn:** Learn from each race. There is no substitute for experience in AR. Your second race is much easier than the first, and so on. Anticipating what will happen in a race is much easier with experience. Learn from more experienced racers about training, gear, racing disciplines and race strategy. You'll undoubtedly learn the hard way, but learn from each and every experience.

# Finding Teammates

- “Getting to the starting line is the hardest part”
- Make racers your friends not friends into racers
- Look for experienced teammates (better to race up than down)
- Be honest and talk before the race
- SMAC Team Finder (in the form section of the SMAC web site)
- SMAC Message Board (in the form section of the SMAC web site)
- SMAC training days
- Network at SMAC clinics
- Internet (AR news groups)
- Contact the race organizer

# 2004 SMAC Sprint Adventure "Theme"

- Beginner to the more advanced racer
- Emulates 24 hour plus race
- Look for big navigation & lots of strategy
- Multiple ropes
- Little longer
- More difficult navigation as the race progresses

# Scoring

- 13 hr cut off
- Final stage determines race ranking (only need one control)
- Look for big navigation in the final stage
- Dropping out
- Penalties: stop & go - added to final time
- DQ

# Do's & Don'ts

1. Private property
2. Interaction with volunteers
3. Encountering non racers
4. Fences
5. Trash TA & race course
6. Low impact on environment
7. Must use mode of transportation as stated

# Race Stages

- Bike 30% to 50%
- Canoe 20%
- Run/trek 10%
- Orienteering 40%
- Ropes 10%

# Bike

- CP's in numerical order
- No skipping controls
- Be prepared to carry all your other gear on this stage
- Could include hike-a-bike
- Security

# Ropes

- Tyrolean traverses, zip lines or other rigging
- Part of any race stage
- Must do (no going around)
- Personal vs. private equipment
- Team must go consecutively
- Planet Rock is in charge at the ropes

# Canoe

- No portages
- Must have PFD on
- Private canoe transportation
- Security

# Orienteering

- Collect orienteering any order
- As many as possible
- Residential areas
- Fences

# Scoring Table at TA/ Finish Line

- Only one teammate to approach scoring table from the front
- No bikes in scoring area
- Have passport out and ready for check
- Stay in line, no cutting in, the person in front of you has to be completed before you can step forward to table
- Know your RACE #
- Your responsibility to pick up maps and to make sure you are checked in

# Maps

- All symbols follow standard USGS protocols
- Different scales
- 5' & 10' contours
- Only maps allowed besides trail reference map

# Emergency Protocols

- Cell phone
- Calling for medical aid
- Calling race organizers
- Dropping out

# What's in the Racer Bags

- Orienteering description sheets
- Orienteering description hieroglyphics cheat sheet
- Horse bike vs. walking trail map
- Passport punch as close as possible
- Gear list as per race stage