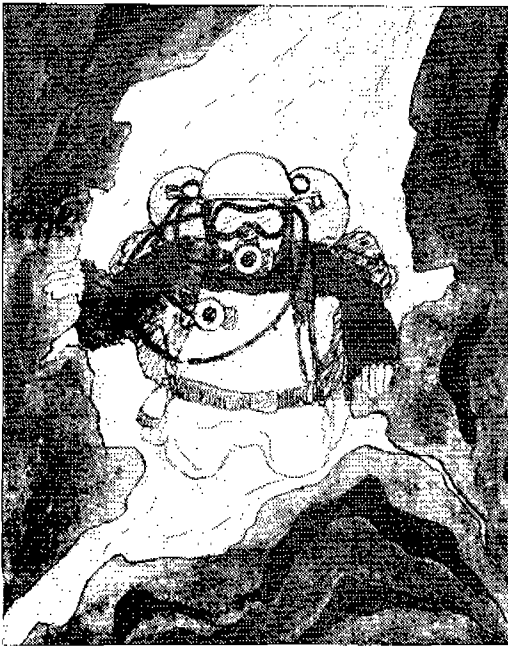


32nd NSS Cave Diving Section Workshop

Conservation and Safety

"Keeping the Sport of Cave Diving Alive"

Pre-registration and Program Guide



1988 Winter Workshop

Saturday, December 31, 1988 -
Sunday, January 1, 1989

Branford High School
Branford, Florida
(21 Miles South of Lake City)

*All interested persons are invited to
attend*

Registration begins at 7:30 a.m. Saturday

Workshop Chairman: Kathy McNally

NSS Member Pre-registration: \$10.00. Nonmember Pre-registration: \$13.00. At the Door (everyone): \$15.00.
Children under 12 (pre-registered or at the door): \$5.00. Registration fee includes a delicious lunch catered by
the Suwannee River Cove Restaurant.

*Sponsored by the Cave Diving Section of the National Speleological Society, Inc.,
an IRS-recognized Nonprofit Organization dedicated to the Conservation, Study, and Safe Exploration of Caves*



Cave Diving Section
of the
National Speleological Society, Inc.
A NON-PROFIT Scientific and Educational
Organization recognized by the IRS

P. O. Box 950
Branford, FL 32008-0950

NON-PROFIT
ORGANIZATION
U.S. POSTAGE

PAID

Permit #849
Miami, FL

LEE ANN HIRES
27998 (5/89)
P.O. BOX 3308
LAKE CITY,

FL 32056

a note on a slate), turned, and started out. On the way out Eaves saw another line and went for it. Because of silt conditions, visibility went to zero. Happe made a line search but could not find her. Happe found his way back to the primary line between Orange Grove and Challenge, and exited successfully.

The recovery was performed by Recovery Team Members Mark Leonard, Lamar Hires, Mark Long, Fred Davis, Tom Morris, Ken Wiglund, Woody Jasper, Bruce Campbell, Lt. Henry Nicholson, and Dan Daniger, using advanced stage-diving techniques.

OFFICIAL ACCIDENT ANALYSIS:

1. **Training:** Both divers were diving well above their level of training. By definition of "Basic Cave" they should not have been using twin tanks, nor diving in the advanced-cave conditions of Orange Grove Sink.

2. **Continuous Line:** During the exchange of lights they lost sight of the continuous line. This slight error proved to be a fatal one.

MIDWEST CAVE DIVING - by Rick Lamb

A group of midwestern cave divers has been exploring various sites in the area. We have had considerable success and have located several caves we believe have not been entered previously. On a recent visit to teach a cavern and cave course, Mark Leonard was taken on a tour of a few of our favorite sites. He was very excited by them, so I thought I'd introduce a few of them to you.

We are currently negotiating to obtain permission to dive Mammoth Spring in Arkansas. This large system should prove to be a great site. There are also many springs on federally owned land along the Current River in Missouri. We have looked into a few of these and are working on permission to further explore them.

One of the better known cave sites in Missouri is Roubidoux Spring. This cave begins with a room approximately 60' high. A passage from there has been explored to about 1620' at a maximum depth of 160'. Ceiling height is generally 20', making this cave ideal for scootering. At this time Roubidoux is being surveyed more completely by a team of divers. A simple survey map is available at present for those interested in this site.

Our favorite site is one we have named Cannonball Spring, because we found a cannonball (of course) near the entrance. We have explored this cave several times and are currently performing preliminary surveys on it. We located this spring with the assistance of Dennis Graves, a ranger in the area. To date we have installed about 400' of survey line. The maximum depth so far is about 50'. Unlike many Missouri caves, which have a single passage, this one has a viable side passage which seems to be going. We will explore that next dive. One recent trip included Mark Leonard, Dave Porter, Cliff Rooker, myself, and one other diver who was recently certified. After a couple of dives there, Mark stated that he really enjoyed this cave and would probably place it in his top ten. He mentioned sneaking back again for further exploring. Dave said that this was the most Florida-like spring he has dived in the Midwest. This cave system is one we will explore and survey as much as possible.

There are many more caves we have only briefly explored, and several yet to be found. We would appreciate any and all support and survey help we can get. I know it won't take much effort to get Mark Leonard or Joe Prosser to visit us, but we would like to encourage everyone to try it at least once. But before you come, be sure to read the book I gave to Mark. It will help you fit in. Oh, and be sure to bring your woolies!

DRACHENHAUCHLOCK - PART II - THE BEGINNING - by R. Ellis and M. Sefton

[This article reports on the initial discovery and exploration of the large underground lake, Drachenhauchlock (Dragon's Breath), in Namibia, Africa, the subsequent underwater exploration of which was reported at length in UWS 15:3, May/June 1988.]

Discovery and Initial Exploration (by R. Ellis). While the rest of our group continued exploring Little Beginnings, Conrad and I set about having a look at the nearby field of pinnacles, systematically climbing up and down the gullies, and peering in all the likely holes. The whole field was like a cheese, full of deep slots and interconnecting tubes, a real phreatic freak's phenomenon. Midway in the field we entered a depression, the bottom of which was choked with fair-size blocks. By dropping stones and shining a light down the gaps we got the impression of a small chamber below. Using Conrad's strength and my supervision we heaved a large boulder out of the way to expose a hole just big enough to slip through. Before committing ourselves to the deep and more so, to pluck up courage, we decided to carry on exploring the field. However, we hadn't gone far before the call of the unknown tempted us back to see if the dust had cleared, a pity really, because we were about to explore a slot which later turned out to be the easier way in.

Slipping through the hole I arrived in a small chamber with a distinctive passage leading down a fairly steep angle. As Conrad came through the hole I headed off down the passage, which rapidly narrowed to become a tall rift of little more than shoulder width. At the apparent end, no more than 20m from the entrance, the rift appeared to be blocked at the bottom by a boulder. Climbing on top and peering down the other side I was assailed by a strong upward blast of hot, damp cave air so warm that within minutes you could feel the sweat breaking out on the brow. You could almost imagine a fiery dragon exhaling hot air below. On the other side the rift continued on and vertically down to disappear out of sight as it curved gently away to the left.

Directly below I could see a floor at about -10m, which extended a short way along the rift, after which the slot continued on down. By lobbing stones out beyond the floor, I could hear them bounce for a good few seconds before a tremendous sploosh echoed up from the depths. By this time Conrad had joined me and I stepped aside to allow him the smell and the thrill of big discovery. Whatever lay below was no mean cave! With excitement rife we thumped each other on the back, shook hands and got down to the serious task of throwing more stones down the rift. Unfortunately we had no watch so we counted the seconds, 1001; 1002, 1003, 1004 spladoosh! No doubt about it, the stones were taking a good four seconds to the water with two of three bounces in between.

Subtracting a good second loss for the bounces, we estimated a depth of some 50m, more ladder and rope than we had with us for the day. In frustration I took a good look to see whether the rift could be chimneyed, at least to the floor below. However, it obviously broadened out and I had visions of getting so far, and not being able to continue or return. In defeat I declared to Conrad that there was a possibility of chimneying the rift but that the exposure was hairy. "Hairy?!" he said. "It's suicidal!" And collapsed in hysterics.

With our story rehearsed, we returned to the first cave and looked for the others. Once the gloomy prognosis for "Little Beginnings" was confirmed, and the cave declared "finished," we had, at last, a full audience. Conrad and I could contain ourselves no longer and let rip with our tales of spectacular pitches and vast virgin caverns. Within minutes we had them in raptures and eager to abandon the survey of "Little Beginnings" (as a measure of what has to come) and rush off to see the new find. Fortunately, sanity prevailed and the team

slowly moved back to the entrance chamber checking for possibilities and surveying the main route.

With the afternoon well in advance, we derigged "Little Beginnings" and moved the gear across to the new site. On arrival Conrad and I recounted our movements and led the team down the entrance to the top of the first pitch. Spellbound, the guys tossed stone after stone down the slot to listen to the tremendous reverberating echo which rose up from the depths. "Enough games, lads, let's get on with the job." Within minutes we had the first pitch rigged and I descended a staggering 8m to the first landing. The floor completely filled the rift and extended along a good 4m before ending. Moving gingerly to the edge, I held my breath and peered over. The rift continued on down to another ledge stretching along the right-hand wall some 8m below me. The left-hand wall bottled out and curved away out of sight while the rift continued on down until it, too, curved out of sight to the left.

Clipping our second ladder onto the bottom of the first, I lowered it over the edge, and after ensuring that it reached the ledge, I carried on climbing down. At the ledge it was necessary to step back half a meter to reach the ledge, which, at that point, was only wide enough for a boot. Fortunately, there were some good handholds and by clinging on for dear life, I progressed along the ledge to firmer footing.

At this point the right-hand widened to about 6m, while below me it fell away some 20m to a large rectangular black hole out of which issued a column of steam. Wild with excitement, I lobbed big stones through the hole and listened to the incredible cathedral-like echo which resonated from the depths below as the stones struck the surface of the lake. With cries of encouragement I tempted Conrad to join me on the ledge where we both stood awestruck for many minutes, each wrapped in the magic of discovering big cave. Unable to go further down, we explored along the rift by following the ledge which extends some 4m before becoming a full floor again. A good 20m further on, the rift led to a rather unpleasant hole which also drops into the lake below. With little else at hand, we returned to the ladders and, as the day was all but over, climbed to the top amidst cheers and questions. With no further ado, we set sail for camp to enjoy a few well-deserved beers and glory in the telling of our tale over and over again.

The following day we were obliged to postpone a return as we had already arranged to go with Helmut Hellweg, the manager of the Ghaub Farm, to look at another cave that he knows of. However, two days later we were back at the cave with every man jack itching to get down the hole. Adam, Colin and myself descended first to rig the bottom pitch for SRT [single-rope technique], followed soon after by Jacques and Mark. Unfortunately, the dolomite was full of hairline cracks not conducive to the placing of bolts, and there were no conveniently sited natural belays. Eventually we decided to ladder the pitch. With this achieved and with Adam Duffin at that stage below the 2nd ledge on a rather precarious perch, he carried on down first. Armed with a rubber inner tube, Adam abseiled through the black hole and slowly disappeared out of sight. With our ears keyed to his every word, he described how he had dropped through the roof of an immense chamber and was slowly descending to the surface of a vast lake with no apparent shore and with only one visible wall some 15-20m away.

Reaching the water, he inflated his tube, set sail, and disappeared out of sight with his voice becoming progressively scrambled in the overlaying echo. As the day was once again well advanced, it was agreed that only I join Adam, the rest planning to return the following day. Down the rope I went, and as I dropped through the roof of the chamber, what a sight to see: Adam by then was almost 100m away and his light shone like a distant beacon to lost seafarers.

With a whoop and a holla I descended to the lake, inflated

my inner tube, stuck my bum in it, and set sail. Picking up the nearest wall, I followed it round to the closest point to Adam and then out into the middle to join him. Adam by that stage had circumnavigated about half the lake and, having been in the water an hour, was feeling cold. His impression of the lake was one of sheer endlessness, and after losing sight of the ladder he had become so disoriented that a tremendous sense of loneliness had swept over him until my light had appeared at the roof to guide him.

Pointing me in the direction as yet unexplored, Adam paddled off towards the ladder while I continued to the nearest wall, and set off to follow it into the unknown. Paddling for what seemed ages, I eventually managed to make out what appeared to be the end of the huge lake passage I was following. Ahead through the mist was what looked like enormous flowstone columns reaching from ceiling to water, and with my imagination running wild I visualized a huge dry passage of Congo 3 proportions disappearing on into the gloom. Alas, as I grew nearer, I could see that the "passage" terminated in a solid wall with a small beach covered in little knobby stalagmites and the flowstone "columns" were nothing more than calcite deposited down the wall. Landing my rubber ducky, I explored the small, steeply sloping beach, thankful that at least here was some small respite to the endless paddling.

Adam at this stage had abandoned his return to the ladder and, encouraged by my yells on discovering the beach, had called on some inner reserve and was paddling slowly after me. However, his progress was slow and so, leaving my temporary refuge, I continued to follow the opposite wall, slowly curving my way back towards Adam's distant light. Arriving opposite him, I left the wall and paddled out to give him the details of my discovery and decide on the next move. Reaffirming our position relative to the ladder, Adam once again set off to return to the bottom of the pitch to prepare himself for the 33m climb back to the others. Returning to the wall, I continued my journey until finally I arrived back at the spot I had originally started from.

Adam by now had just started his climb and with no difficulty soon reached the top. Before making my climb out, a little rerigging took place up top, so by the time I got onto the ladder I, too, was pretty cold. During the wait I reflected on the structure of the cave and surmised that, with the walls generally entering the water at 60° and the roof a huge dome, the lake surface existed at the top of an enormous flooded chamber. As I drifted around the lake I lost sight of the ladder and Adam's red tackle bags at the bottom to guide me, it was interesting to reflect on the overwhelming sense of disorientation I experienced while visually searching for the bottom of the ladder. With the all-clear from above, and with the splash of the lifeline to orientate me, I was soon at the bottom of the pitch and on the way out. That night the farm manager, Helmut Hellweg, arrived for a braai (barbecue) and the celebrations continued into the early hours.

Dragon's Breath Unfolds (by M. Sefton). It was Royal Wedding day today, the second it's been my pleasure to avoid, thanks to well-timed caving expeditions.

Here, far from "civilization" in our own little world of nature and of sunshine, of good food, good beer, good company and good caving, the worries and problems of the big wide world were far from our thoughts. Today only Dragon's Breath Cave mattered. All of us, except for Rog and Adam, who reached the lake yesterday and who were now off to do a bit of prospecting, were keen to go down and see what sounded like a really decent find, the first of the expedition. Our main directive was, of course, to survey the perimeter of the lake and to make sure there were no leads outstanding.

As usual, the start was late and leisurely and we were not underground until lunchtime. Jacques and Dick, the surveying team, descended the pitch to the water first. Surveying a lake of this size with bums through inner tubes and water lapping

around armpits was no easy matter. Jacques had a plank across his knees and chest which gave him something to rest the notebook on, out of the water, and a couple of little wooden homemade paddles to help him get around with a minimum of splashing. Starting from the ladder, they surveyed to the nearest wall, and then, proceeding anti-clockwise along the wall, headed towards the far end where the "beach" is located.

The rest of our party were all eager for a look at the lake. Unfortunately, with only two "boats" most of us would have to do this from the bottom of the ladder. First, Colin decided to put a bolt in the wall at the top of the first pitch in order to hand the ladder out of the slot. This was not so easy; half an hour later, two rock anchors had been totally blunted and the hole was still only 2cm deep. I don't know what was in this rock, but it was one hell of a lot harder than ordinary limestone. In the end, the anchor was hammered home, leaving a good 2 to 2-1/2cm sticking out of the rock, thus qualifying it for the inaugural M.A. SeftonWorst-Placed-Bolt-I-Have-Ever-Seen-in-My-Life Award. Not even the finest efforts down the deep holes of it Picos de Europa in northern Spain could match this one. Never mind, it would still do for a deviation. Besides, it's amazing what a multitude of sins can be hidden behind a well-chosen hanger.

In turn, Sue, then Karin, then Colin, and finally Conrad abseiled to just above the water, self-lining back up the ladder after a good look around. Karin had the best view of all. By the time she reached the bottom of the ladder the surveying team was two tiny floating figures at the furthestmost point in the cave and the echoes were at their most resounding.

Meanwhile the surveying went on. Jacques' self-propulsion and keep-the-book-dry system was working well. The tremendous echo and reverberation made communications difficult; sometimes it was easier to understand the echo than the original shout. In many places the walls entered the water at a shallow angle; sometimes the water seemed to lap the roof. Seldom did the walls plunge into the depths with anything approaching verticality except near the Beach. Surely this chamber must be vastly bigger underwater than it is above. At one point, Dick lowered 40m of tape into the water. Visibility was perfect and the end of the tape could be seen 40m below. But of the bottom, there was no sign. Finally, after three hours, the circuit was complete and two wet and cold surveyors made their ascent to warm sunshine above.

The main task of the day was done and it remained only for the rest of us to see this vast underground chasm for ourselves. Conrad and John descended to use the "boats," followed by me to try to take pictures from the bottom of the ladder. Steve volunteered to stay at the top of the first pitch, lifelining people up. Conrad was the first of our party down.

"There's only one tyre down here—ask the others what happened to the second one." The message was relayed to Dick who was now at the top of the first pitch.

"I left mine at the bottom with the ladder through the hole to stop it floating away. Jacques, what did you do with your tyre?" "I left it sitting at the bottom of the pitch."

Ten minutes later, Conrad found Jacques' tyre. Air or water currents had taken it right over to the far wall. John descended next and the two of them started to paddle across the lake. Now it was my turn. Abseiling from the ledge, the first 10-15m were down a wide slot. Then, some 20m above the water, the walls vanished and I was suspended from the roof of a truly impressive chamber. The near wall was visible by my carbide light but in the other three directions—nothing. Even the water looked pitch black.

John and Conrad were bobbing about like corks below me. I abseiled down to a meter or so above the water and clipped my cowstail into the ladder. A motley collection of boots, socks, ascending gear and personal bags dangled from the last four rungs. I took a couple of photos of John and Conrad, two figures seemingly suspended in an inky blackness. At a distance, it

was impossible to distinguish the water from the vast space above. The whole of Conrad's tyre was completely underwater. It was a good thing he was not wearing his size 16 boots—I'm sure the extra weight would have taken him straight to the bottom! At last it was time for each of us to make our ascent, no easy matter for the boatmen. First you had to climb a couple of steps up the ladder, clip in your cowstail, try and put on socks, boots and other paraphernalia without dropping anything in the water, deflate your tyre, and then carry the whole works back up the pitch. By 9pm the cave was detackled and we were on our way home after what was undoubtedly for each one of us the best trip of the expedition.

The next morning was spent pottering about, sorting gear, etc.—we were all in that sort of mood. Then came the communal plotting of the survey, with me reading out the figures from Jacques' notebook and Jacques doing the plotting. For Roger and Adam's benefit, Jacques and I had prearranged for me to divide all the measurements by two, giving the survey the appearance of only being half its actual size.

Gradually the outline of the lake was unfolded before us and after half an hour the map was drawn. The loop closure was barely two meters out, a real credit to our surveying team, who had carried out their task in less than ideal conditions. The lake was not, as we had imagined, a big chamber with a broad passage leading off towards the Beach, but a single vast rectilinear hall with a sizeable low alcove off one side. Rog and Adam seemed pretty pleased with the result, a chamber apparently 40m wide at the narrowest point (the Beach end), over 50m wide across the middle, and a good 100m from end to end, almost exactly as they had estimated. Of course, those of us who knew its real dimensions could not conceal our delight. The trick was revealed and it was beers all round.

I wonder how Dragon's Breath compares with other underground lakes around the world. The above-water section alone must rank as one of the great underground chambers and goodness knows how bigger it is below the water line. Statistics, of course, only tell half the story. To hang from the roof on a ladder and to paddle around in that seemingly endless sea is an experience that I'm sure none of us will ever forget.

[Ed.—For those readers who did not see the long article by Charles Maxwell on the subsequent cave-diving exploration of Dragon's Breath in UWS 15:3, the cave proved to have the largest surface area of any underground lake known in the world, with depths attained on mixed gas of 300' and penetrations of 330' promising more.]

GEAR FOR SALE

1 Set Double 100's steel, new 1985, with bands and aluminum backplate. Sherwood Ideal manifold.

1 Tekna DV3X Scooter, with fast charger and case. Less than 5 hours running time.

2 13-Amp-Hour 12-Volt Wet Nicad Battery Pack, with PR-36 arm light and tank mount.

2 7-Amp-Hour 12-Volt Wet Nicad Battery Pack, with PR-36 arm light and tank mount.

6 12-Volt DC-DC Battery Chargers, with cords and gauges (field charger).

Call or write for prices, photos or spec. sheets: Tim J. Brown, 57055 Marietta Rd., Byesville, OH 43723, (614) 685-2594 or (614) 439-4041.

WANTED: Dive Buddy to explore caves in the Yucatan (Belize, too?). Envision 10 days/2 weeks, low cost, low stress, off-season cave diving; enjoying local food and accommodations (camping OK), must see ruins. Call Mary Garvin, 212-925-3936, any time, leave message.

ALL current Team Members are asked to carefully fill out this Application Form and send it in with a copy of their Rescue/Recovery certification card to the appropriate Area Coordinator(s) listed on page 3. [Note that you may qualify for more than one area, e.g., Caribbean as well as Georgia]. This will give us a uniform, up-to-date record of all Team Members and their qualifications. It is very important that you do this. Please cooperate.

Application to join the Recovery Team

Name: _____

Address: _____

Birthdate: _____ Level of Cave Diver training _____

Date of Training: _____ Agency: _____

We can not use you if we can not reach you. Please list your regular points of contact and approximate hours you can be reached at these phone numbers. Remember, if you change address, work, or home phone numbers, you must notify your area coordinator in writing. This is your responsibility.

Home #: _____ Normal time/days: _____

Work #: _____ Normal time/days: _____

Employer's name: _____

If you were called on a recovery, would you and could miss work? _____

Would you accept responsibility for an entire recovery operation? _____

Do you have a passport? Yes _____ No _____

Cave Diving Experience

Years of experience: Less than one 1 - 3 3+ Non-diver

Deepest depth you can comfortably work in (with air): _____

Have you any direct experience with mixed-gas diving? If so, please explain.

Longest penetration: _____ Last 12 months: _____

Total # of cave dives: _____ In past 12 months: _____

Which of the following do you believe best describe your cave diving practices:

Adventurist: _____ Moderate: _____ Conservative: _____

List your approximate experience (# of dives) in each of the following:

Survey: _____ Sump: _____ Scooter: _____ Other: _____

Cave Diver Recovery Team Application

List rescue/recoveries you have participated in at anytime in the past:

List any special training you have received regarding rescue/recovery (including special law enforcement courses/ civil defense/ NCRC, etc.):

List special diving/caving equipment that you own (this includes extra diving cylinders/regulators/camera equipment/climbing gear/etc.):

List any other items that may be of use during a recovery, such as generators, radios, special camping gear, etc.:

Please use typewriter or very clearly print to complete application and return same to the area coordinator(s) serving the region(s) that you can assist and include a photo copy of your Recovery certification card

The revised Official Report Form on the following pages is provided for all Rescue/Recovery Team Members. Please make copies to be kept with your Rescue/Recovery materials. (And for the rest of you, just make sure your name never appears on that first line!)

WET/DRY SUIT: _____ FULL/SHORTY: _____ CONDITION: _____ HOOD: _____ GLOVES (L/R): _____

BOOTIES (L/R): _____ WEIGHT BELT: _____ LBS : _____ CONDITION OF BELT: _____

BUOYANCY COMPENSATOR: _____ INFLATED AT SCENE (Y/N): _____ AMOUNT: _____ GENERAL TYPE (JACKET/WINGS, ETC): _____

INFLATION MODE (ORAL/POWER/CO2): _____ MASK (Y/N): _____ CONTENTS (BLOOD): _____ LOCATION: _____

FINS (Y/N): _____ GENERAL TYPE (OPEN HEEL/ENCLOSED HEEL): _____ TAPED: _____ LOCATION: _____

SNORKEL: _____ KNIFE: _____ LOCATION: _____ TANK(S): _____ SIZE: _____ TYPE (STEEL/ALUMINUM): _____

POSITION: _____ FILL PRESSURE AT START OF DIVE: _____ AT RECOVERY: _____

VALVE TYPE (J/K/Y/DUAL): _____ COMMENTS: _____

REGULATOR(S): _____ SINGLE/DOUBLE HOSE: _____ QTY: _____ OCTOPUS (Y/N): _____ LONG HOSE (Y/N): _____

FUNCTIONAL AT SCENE (Y/N): _____ SPG (Y/N): _____ PSI _____ COMMENT: _____

LIGHTS: _____ QTY: _____ TYPE: _____ LOCATION: _____ OPERATIONAL: _____

REEL (Y/N): _____ GUIDELINE (Y/N): _____ CONDITION: _____

DEPTH GAUGE (Y/N): _____ SLATE (Y/N): _____ TABLES (Y/N): _____ METER (Y/N): _____ OTHER EQUIPMENT: _____

ABOVE EQUIPMENT RENTED OR ON LOAN TO VICTIM (Y/N): _____ SPECIFY YES BY * TO ABOVE GENERAL COMMENT ON EQUIPMENT: _____

SCENARIO DESCRIPTION: _____

OTHER FACTORS: _____

REPORT PREPARED BY: _____

ADDRESS: _____

REPORT DATE: _____ RECOVERY TEAM MEMBERS: _____