COFFINS PATCH

THE U.S. GOVERNMENT

V S

MEL FISHER & TREASURE

SALVORS INC

b y

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BACKGROUND

On April 22. 1992 the Envirinmental and Natural Resources Division of the U.S. Department of Justice filed a preliminary injunction enjoining Mel Fisher's Treasure Salvors Inc. from "further dredging and salvage activities within the Florida Keys National Marine Sanctuary. This Sanctuary designation did not just cover the already large Pennecamp Marine and Loo Key Marine Sanctuaries. but literally all the marine resources of Monroe County.

The Florida Keys National Marine sanctuary was established by Public law # 101-605. 104 Stat. 3089 (1990). commonly known as the Florida Keys National marine Sanctuary and Protection Act. in this document. "Sanctuary Act". To quote directly from the Injunction Brief filed against Salvors Inc. the purposes of the Sanctuary Act were as follows- " In passing the Sanctuary Act. Congress found that the keys included spectacular. unique and nationally significant marine environments. including sea grass meadows. mangrove

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islands. and extensive living coral reefs" that support biological communities possessing extensive conservation. recreational. commercial. ecological. historical. research. educational. and aesthetic values. (Sanctuary Act 2 (2) Preliminary Injunction memorandum)

Specifically the Government claimed that Fishers employees were "Treasure hunters who have been dredging the sanctuary in search of shipwrecks". Further the Government held that "In the pursuit of private gain and at the expense of other Sanctuary users, they have already caused irrepairable damage to seagrass communities that are critical to Coral Reef Communities (Injunction 1-2)

In the Injunction of April 22. 1992 the government outlined the evidence of the alledged destruction to natural and cultural resources in an area that had been salvaged for years knows as Coffins Patch. an area approximately four miles offshore south of Grassy Key. Government investigations of the Coffins Patch sea bottom was carried out on March 22-23 1992 by an interdisciplinary team made up of Mr. Billy Causey of NOAA the sanctuary manager, Allan Bunn. Ervan Garrison etc

The Injunction states that Mr. Causey (p2) along with Federal and State Officials "discovered several large craters apparantly blown into the Sanctuary seabed near the are a referred to as Coffins Patch". Further investigation as reported in individual declarations by Government officials and witnesses "revealed more than sixty craters covering a distance of more than a mile. These craters which destroyed extensive areas of seagrasses. were as large as thirty feet in width and six to nine feet deep. Videotape of the bottom area was made along with measirements of the alledged disturbed areas. and ariel photographs were shot.

Quickly the Government summed up the damage to the Sanctuary Resources that the Treasure Hunters alledgedly perpetrated. Again a quote from the Injunction is in order. - "Given the large scale of the disturbance to the seabed. an extensive biological assessment will be required to evaluate filly the extent of the damage to resources of the Sanctuary. Thus far. scientists have documented the destruction of sea fans. seagrasses . and coral. including fire coral. The extensive destruction of seagrasses is particularly significant. because it is an important component of the coralreef ecosystem. It provides food and habitat for fish. shrimp.

crabs and mollusks. It also contributes to water quality in the coral reef. The disruption of the seagrasses, coral, and other reef communities and structures will make the reef ecosystem vulnerable to erosion during storms and may lead to further losses of habitat. The destruction of seagrasses will take decades to heal.

Next the Government developed it's theory as to the means or method by which the Treasure Hunters impacted the seagrasses and wider ecosystem. "The craters discovered in the Sanctuary were identical in appearance to those commonly produced by a dredging device known as a propwash deflector, or "mailbox.". Mailboxes are used by treasure hunters to deflect and magnify the displacement of water by a boat's propellers to blow away seabed sediments and expose artifacts. They are seldom used by qualified archaeologists bacause they cannot be adequately controlled, and irrepariably destroy valuable archaeological information.

As if there was any question or denial that Mel Fisher is a treasure hunter or whether his crews were employing mailboxes to displace bottom sediments the Government Injunction presented the recap of contact in the field with working salvage crews and Sanctuary Officers. --- On April 1, 1992 harry Jackson, a law enforcement officer with the National Marine Sanctuary Program, observed the vessel Bookmaker in the Sanctuary in the vicinity of Coffins Patch. Officer jackson approached the Bookmaker, which was equipped with twin mailboxes. The Captain of the Bookmaker, Jacques Lemaire, admitted to Officer Jackson that he had blown some craters visible in the seabed at Coffins Patch. ------ On April 2, 1992, Florida Marine Patrol Officer Steven Golden stopped the vessel Tropical magic, which was equipped with Mailbixes, in the Sanctuary near Duck Key. The Captain and owner of the Tropical magic, James Stowell, told Golden that he had been working Coffins Patch. He told Golden that he had removed artifacts from that area. Mr. Stowell said that he was working for defendant Melvin A. Fisher. On April 4 and 5 both the Bookmaker and the Tropical magic were observed in Coffins Patch (Bunn dec) Both vessels had divers in the water.

The summary of allegations is followed by the decleration --- "Thus, by the admissions of the Captains of the Bookmaker, Dauntless and Tropical Magic, all three defendant vessels--- worked the Coffins Patch area as part of the treasure hunting activities of Salvors, Inc. along with his son Kane Fisher. Mr. Fisher had been explicitly warned that under the Sanctuary Act and the MPRSA, any injury to the

natural and historical resources of the Sanctuary was prohibited without a permit (Develop here. a permit from Florida or the Federal government) ------ Nevertheless. defendants the Bookmaker. dauntless. and Tropical magic to Coffins patch to retrieve historical artifacts through the use of mailboxs. which irrepairably damaged both natural and historical resources in the Sanctuary.

The Government summed up its position with an Injunction against salvors from "Destroying public resources until there could be a trial on the merits of the case". The Government concluded that " Despite explicit warnings. defendants injured and destroyed natural and historical Sanctuary resources in the pursuit of treasure. Following notice that this suit would be brought. defendants Melvin A. fisher and Salvors Inc.. through counsel. refused to assure the government that they would desist from further treasure hunting in the Sanctuary in the future or even until the Court could reach the merits of this case".(Injunction 10)

COFFINS PATCH - HISTORICAL BACKGROUND

Probably no author writing about treasure hunting in the Florida key's has said it better than John Potter in his compendium work The Treasure Divers Guide- "Per square mile of sea bed accessable to divers there is probably no richer treasure- hunting field in the world than the ridges of reefs outlying the 200- mile string of limestone and coral islets called the Florida Keys. From Triunph reef off Biscayne Bay. down through Pacific. Turtle. Carysfort. Molasses. Conch. Crocker. Alligator. Tennessee. Coffin's patch. Sombrero< Looe Reef. and Tortuga bank on the southwest end. they formed a solid barrier of teeth to smash in the hulls of Spanish Treasure Ships winding there way from havana into the New Bahama Channel. From 1550 to 1800. probably 12.000 vessels passed along the flank of this submarine death trap. And every fifty or sixty years the law of averages would come into play and westward- rushing winds on the front of hurricanes would hurl a flota against their coral points". (Potter 212-13)

On July 15. 1733 just such a storm caught the New Spain Armada. a fleet of twenty- two ships in the the New Bahama Channel. The vessels were probably caught in the mid keys as strung out in a line they tacked their way north. ever wary of the line of submerged reefs to the west and the treacherous sands of the

Bahama Bank to the east. On the 14'th of July the winds freshed from the east quickly growing to gale force. Due to the power of the storm the fleet was unable to turn. back to the southeast and return to safe port in Havana. The night of the 14th and day of the 15th the vessels of the combined fleet were wrecked along a fifty mile swath of coastline.

The vessels lost and their physical deposition along the keys reefline was fairly well known. for the Spanish began immediate salvage. One of the most famous of the vessels salvaged in both historic and modern times was the Capitana. flagship of General Rodrigo de Torres y Morales which grounded in eighteen feet of water off of Key Largo. Accounts of immediate salvage operations differ but it is known from historic sources that several vessels rode out the storm. two others were grounded and later refloated. Again. the research of Potter illuminates the aftermath of the disaster - "Later the Rubi Segundo (gunsjettisoned at the time of the disaster and recovered in 1957) was probably refloated and returned to Havana. The sloop Murgia and two merchant naos were also refloated and saved. Two others the San Pedro and Rosario were reported swept all the way back to Cuba and wrecked there. The other sixteen ships - three Galleons and thirteen naos and smaller vessels were left in variuous stages of disintegration along the Keys most of them between the outer reefs and the shore in depths of 8 to 40 feet.

The riches carried by the Combined Armada must be computed several ways. There was of course the official manifest with figures of consigned precious metal. gold and silver coin and bullion including the Crowns share the Royal Fifth. Contraband trteasure was another issue. that plagued the Spanish Crown and would leave unanswered to today the question - what is left to be recovered?

The twenty two ships of the Combined Armada carried about 20.000.000 pesos. nearly all in Mexican silver. In immediate salvage operations using native skin divers in 1733-34. the Spanish recovered a total of 12.000.000 pesos nearly all in silver coin and ingots. When the project was abandoned approximately 6.000.000 pesos of coin and bullion was either in deep water wrecks or scattered in the lagoonal area between the barrier reef and the shoreline. (Potter 221)

Also there was contraband gold and silver aboard. the smuggled property of Spaniards returning to the mother country.

The total of all precious metal aboard the combined fleets. manifested and contraband will never be known. What has made the 1733 treasure so attractive to salvors are stories that even with the staggering loss of the fleet. more treasure was recovered by the Spanish in the immediate recovery than was listed on official manifest at the inception of the voyage.

Know one knows with any certainty how much treasure remains to be recovered from the losses incurred in the 1733 disaster. Deep water losses in the depths of the Gulf Stream (Florida Current) will probably never be realized. Some believe that major deposits of treasure are still to be recovered from the 1733 fleet; Potter takes a more conservative view of the potential for 1733 recoveries of major significance- " Although most of the known sites have been fairly thoroughly salvaged. artifacts and money are still being recovered. It would be reasonable to say that there is still treasure lying in the ballast of every one of these ships. but onnly a few of the deeper and more recently located sites still hold enough coins. jewelry, silver bars. and plate to offer prospects of a major recovery. The chances of a big strike are probably better in the deeper sand pockets around the ballast mounds. and along the wreckage trails of the disintegrating hulls leading in from the outer reefs". (Potter 223)

Coffins Patch is a symbol in the 'micro' sense of the history and trouble with Treasure Hunting in the Florida Keys. Known as the New Bahama Channel the passage up the Straits of Florida utilizing the Florida current resulted in hundreds of shipwrecks along the Florida Keys and the lower eastern penninsula of Florida and the Bahama Bankas well as the Little and Great bahama banks.

There have been three eras in Florida keys Treasure Hunting and Salvage. First there was an initial era of almost immediate salvage and recovery of treasure cargos lost on the offshore reefs of the Florida keys. In the case of the Spanish 1733 fleet vessels were lost in two depositional areas that made quick and timely salvage relatively easy. First there were the vessels that impacted the fringing system of barrier reef and became relatively shallow water recovery sites where the Spanish with native divers and close proximity to Havana could responed quickly to the catastrophic loss and began almost immediate salvage operations. Those vessels that

were carried over the barrier system by the forces of wave and wind were deposited in the lagoonal area where they became shallow water shipwrecks lying in fifteen to fourty feet of water; and again highly accessable to salvage. Once initial salvage was carried out by the Spanish there were recovery activities by native peoples as well as the primary foes of the Spanish in the New World, the English.

THE TRAIL OF TREASURE AT COFFINS PATCH

Although the "Coffins Patch" area from Duck Key south to the southern extreme of Marathon had been historically worked it was the era of Mel Fisher, true professional salvage with large vessels agressive divers and most importantly state of the art remote sensing equipment such as the proton magnetometer.

Many of the part time, but successful treasure hunters in the Keys consider the systematic use of the magnetometer as the key that revealed the riches of Coffins Patch. This area had been speculated to be one of the most fertile areas where 1733 treasure might be found. Here it was speculated might lie the cargos of two of the richest 1733 galleons, the San Fernado (Fernando) and the San Ignacio. Fisherman had reported a large deposit of scattered ballast at the deepwater edge of Hawk's Channel inshore of Coffins Patch. "The shoal itself rising from deep water to about fourteen feet, bore the debris of several wrecks - strewn ballast rock, and , some isolated pockets of rigging and scattered cannon balls. Small part time salvors worked Coffins Patch making limited recoveries from the widely scattered debris.

When Mel Fisher turned his attention to the area the picture changed. Treasure hunter Marty Meylach describes the early days of the Fisher operation, in his nicely written account of Keys Treasure Hunting, "Diving to a Flash of Gold" - " Mel Fisher however, had big crews, a supurbly equipped boat and above all, that electronic treasure eye, the magnetometer; and he was bent on scouring the Keys for riches. In due time he arrived at Coffins Patch and began to mag. The detection device scored frequent matellic "hits". They were so frequent in fact that that the crews did not try to dig at each spot but began throwing out buoys each time the machine registered. Gradually the patchwork of buoys fell into a pattern. Coffins Patch bore a trail of submerged metallic objects, hidden beneath sand and grass in water averaging fourteen feet deep. The trail extended

across the shoal in a westerly direction and in places was one hundred yards wide" (Meylach 192)

It was this same spot salvaged first in 1961? that Salvors would return too in 1992. and which resulted in the present-current government injunction. The technology to salvage this strewn field of anomalies was the prop-wash deflection or "mailbox". operations. Craters were dug during this in "61" operation as they were. and so described by the government experts. One of the questions asked by the on site evaluation team retained by Salvors is - What additional damage is the Government alledging was done on this repeat of the earlier corridor of treasure investigation.

This strewn field or corridor as described in "Flash of Gold" was later graphically described in a 1986 Federal Court opinion rendered as the result of salvor rights litigation. _ "The ships closest to the eye of the hurricane suffered a tremendous battering. One ship, believed to be the San Ignacio, was driven across a mile wide shoal later to be known as 'Coffins Patch'. She burst open at first impact. dropping many of her cannons and anchors..... For each yard she moved the ship gave of herself in bits and pieces. Her innards were scattered in a glittering trail a hundred yards wide. She dropped ballast rock. coins. cannon. and people as she was mauled along. No power could have wrought more total dismemberment".

Using the magnetometer and buoy system along with the mail box to displace sediment down to the bedrock. the excavations at 'Coffins Patch' began. 'The rewards were immediate and rich. One hole alone yielded a thousand coins in a single day (a recovery that rivled later find on the Atocha - Santa Margarita operation) including pillar dollars in good condition. From the shoals of Coffins Patch. others in years to come would take muskets. fine pewter and among the scores of interesting oddments. a brace of miniature ornamental cannon wrought in solid silver'. (Meylach)

EXPERT REBUTTAL OF NOAA DECLARATIONS

Following the issueance of an injunction. the receipt of the NOAA expert declarations and a Federal Magistrate Hearing.. Treasure Salvors Inc. retained an expert team to access the alledged damage caused by prop wash deflectors and bottom investigation by treasure hunter dive crews.

From the outset it be pointed out that the Coffins Patch area off of the middle Florida keys posed some problems for the survey team. They are ennumerated as follows.

1. There was no base line data available on the survey area for either the NOAA Investigators or the Salvor Investigators to measure long term or short term disturbance to natural or cultural resources.

2. Coffins Patch had been worked historically by treasure hunters utilizing prop wash deflectors with no recorded claims of ecological damage by natural resource experts.

3. The wrecks of the 1733 fleet as well as other historic shipwrecks scattered along the keys had been virtually, with some exception been ignored by cultural resource experts and academic archaeologists.

4. From the early days of organized treasure salvage following World War II numerous degraded shipwreck sites had been salvaged by the 'week end" variety. as well as the professional salvor; the issue of degredation of the natural environment was never an issue in the legal struggle over salvage rights in the Florida Keys.

5. From the era of Art McKee in the 1950's the issue in the Courts was the right to the ownership of treasure and artifacts. not the issue of environmental impact of shipwreck salvage. The issue was a legal one . with little or no reference to negative environmental impact. The salvage cases were settled in the Courts; salvage permits were issued.

6. It should be pointed out that since the mid nineteen sixties along what has come to be known as the Treasure Coast; a strip of the Florida esat coast stretching from Sebastian Inlet south to Vero Beach

there has been syatematic treasure hunting and salvage of the Spanish Fleet lost in 1715. Extensive prop was deflection was utilized to displace bottom sediments.

INDEPENDENT SURVEY OF COFFINS PATCH SITE

On May 20. 1992 an independent team of marine professionals surveyed the site at Coffins Patch that had been marked and buoyed by the Department of Transportation. NOAA investigators. The team consisted of Dr. Henry Feddern an independent contractor, Florida Keys resident, and sanctuary user; and Dr. Robert Baer a Cultural Resource specialist to inspect the alledged impact to cultural materials. Dr. Feddern has three earned degrees from the Rosensteil School of Marine and Atmospheric Science of the University of Miami. These degrees include a B.S. degree in zoology and a M.S. and Ph.D degree in marine biology/ icthyology. Dr. feddern serves on the advisory panel for the Federal Gulf of Mexico Fishery management Council's Coral Management Plan and has been Scientific Laison for the Florida Marine Life Association.

Dr. Robert Baer is a consultant in Cultural Resource Management specializing in remote sensing and problems of shipwreck salvage and archaeology. Dr. Baer has an M.A. degree in East Asian studies specializing in the art and archaeology of East Asia. and masters and doctorate in Public Administration concentrating in the management of cultural resources. Dr. Baer has carried out a number of state and federally approved CRM studies as well as comprehensive marine salvage research designs.

FIELD METHODOLOGY SURVEY AREA # I - THREE CRATERS

AT 9:00 AM on monday May 20. 1992 the field team performed a physical survey of the earlier described NOAA survey area which was delineated by three NOAA placed marker buoys. one visible on the surface. and two sub surface. The survey vessel from Mid Keys Dive Center anchored in approximately twenty feet of water just south of the buoy cluster. The information below is a composite of the observations made by Dr's Baer and Feddern and is

the labor of their bottom survey performed together SCUBA assisted as well as later independent bottom swims on the same day.

Three areas were initially surveyed together by the survey team. Without the NOAA aerial photos in hand it was difficult to ascertain if the holes surveyed by the Baer - Feddern team are the same as described in the NOAA declarations for court. We surmise that since these prop- wash generated holes were in such close proximity to the marker buoys that they are the holes described in the declarations. The craters and surrounding marine habitat were all within a twenty meter radius of the NOAA buoy. It is alledged by NOAA that all of the holes in this area were dredged during the period of time, 1- 29- 92 to 3- 28- 92.

Wave conditions were moderate at the time of the survey, running two to three feet, with for the Coffins Patch area good subsurface visability of 20 to 30 feet, with slight sediment transport on the bottom as an indicator of water surge and sediment transport.

The initial priority of the team was to measure the depth and circumference of the craters. Concomitant to this were two other considerations, First in what physical shape and condition were the marine organisms inhabitating the areas impacted by the prop- wash technology and last but not least what effect were the physical processes at work on the bottom, drift and sedimentation having on the shape of the holes. The methodology used in ascertaining depth of the holes was to place a rigid aluminum ruler in the center of the hole then reading from a horizontal position the depth of the hole in relation to the sea bottom surrounding the hole. Generally the holes surveyed by the team had a diameter of twelve feet and a depth of center of 25 inches.

Coffins Patch bottom topography may be described as a "patchy" area with intermittant bottomscape composed of rocky rubble, sandy patches and raised elevations composed of sand stabelized turtle grasses. This bottom shows the effects of strong current, sediment transport and hydrographic survey charts show striking historic changes in topography that include the eroding of islands and shoals by the processes of wind, wave and tide. The first hole surveyed lay in deep sand surrounded by patches of rippled sand and intermittent small beds of moderately dense turtle grass. No fishes or marine organisms were present in the sandy areas nor in the sea grasses which would have to be classified as open bottom

areas with little of the craggy, elevated relief present that provides sanctuary for free swimming marine organisms.

This first hole examined was half in sand and half in an undercut area of turtle grass. We were unable to tell if the prop-wash system had undercut the turtle grass forming a ledge or if this elevation was caused by the natural accretion caused by current where a stable an unstable area interface or meet. Here the sand and rubble were built up in an arc on the sand portion of the hole's rim. The undercut was far smaller than that seen in natural channels that cut through turtle grass beds in the near shore throughout the keys. This particular hole measuread as stated above, circumference 12 feet and depth at center point two feet. Like all of the other holes this one was partially filled with rootless turtle grasses which theoretically argues that this material was not displaced by prop-wash technology but consists of sea grass detritus the remains of which may be seen along Keys shorelines and within the root systems of mangraove communities. The holes were filled to a level of about a foot and the bottom of the holes could not be seen by the survey team. Closer examination of the holes revealed masses of brown algae, some sponges, gorgonians and small two to three inch reef fishes not present in the open sandy and patchy grass areas. It appears that the holes with the sea grass detritus provides a sanctuary for smaller reef fishes. It appears that these small fish are refugees from the larger barrier reef called the "Elbow" located some two hundred meters to the east of the survey area.

The rubble in the arc along the sandy portion of the measured crater consisted of rocks and eroded, lon- dead fragments of staghorn coral. This coral rubble is the same material that composes the greater part of the Coffins Patch bottom area. It appears that the force of the prop- wash mechanism displaced this material around the lip of the crater for there were only small, light coral materials within the area of the crater. This material was bare of large attatched organisms and possessed a different color on the underside supporting the thesis that this was surface material forced to the rim of the crater by the force of the prop- wash. The rubble although seemingly barren, was already being colonized by algae and other organisms. The surfaces exposed to light were covered by a fuzz of algae and hydroids averaging one- fourth- inch in height. Occasional colonies reached three quarters of an inch in height.

Two additional holes were surveyed. lying adjacent to (for survey correlation purposes) the NOAA subsurface buoy marked # 18. This adjacent buoy markes the hole which measured 20 feet by 40 feet. with a depth of 30 inches. This crater was the largest that the survey team could find within the entire Coffins Patch area which was observed as the result of a long surface swimming survey over the area captured in the NOAA aerial photos. The only deepeer hole. measured 40 inches but with a circumference smaller than the above described holes; this hole was within sight of the buoy line as well.

Both of these holes were encircled by the above described ring of rubble. and both were partially filled with the remains of rootless turtle grasses. Larger and deeper than crater nimber one these two craters were the homes of larger scattering of reef fishes. primarily wrasses and tangs. A live three inch pectin shell was attatched to a formerly buried staghorn fragment at the base of the hole. Two mantis shrimp holes were located on the inner slope of the 30 inch deep crater. There was a marked sand transport down the sloping sides of this crater suggesting that the resedimentation rate of these holes in this high energy environment is relatively quick.

SURVEY AREA # 2

The second dive site was located within the older body of the crater field two hundred meters due west of the buoy area on an eventual course to the shore. In this area the bedrock was at or near the surface; at no point in this area was the rock relief higher than 12 inches. The habitat undisturbed by prop- wash blast was a mixture of low bedrock and sand areas scattered with patches of turtle grass. Owing to the open terrain of this bottom area there were no species of reef of small reef fishes observed; although some larger reef species were later observed. There were numerous gorgonians. sea fans. scattered sponges. a few small stony coral colonies; the majority of the rock surface was covered by low alge fuzz.

The disturbed habitat was quite different however with prop-wash holes overlapping showing the earlier progression of the dredge operation. The general appearance of the disturbed area was as if a reef profile of 40 to 50 inches was inverted to extend down to the bottom. Plateaus of bedrock mixed with windrows of small boulders and rubble indicated that the blowholes overlap extensively in this area; little sand was seen. The tops of the bedrock plateaus

within circular blowhole patterns were colonized by large gorgonians and small coral heads similar to the colonixation pattern of the undisturbed area. Some damage to gorgonians was observed by the survey team. The stony corals of the plateaus were healthy and did not show any damage from the prop- wash operation. except for one colony thjat was`partially bleached. but alive. Two featherduster worms obserbed imbedded in coral were alive and well. The analysis of the impact of the prop- wash was that the force of the downwelling water system had blown the sand and loose rubble out of the spaces between higher plateaus of bedrock. piling the loose rubble at the periphery of the water current. The loose sand was transported by prop- wash blast and natural current away from this site. Stony corals were not seen in the sand areas of the undisturbed bottom; the only way for stony corals to be killed is for the rubble to cover the tops of adjacent plateaus. which it appeared not to have done.

AREA # 3 - THE ELBOW

The third area surveyed was seaward of the NOAA buoy areas. a natural patch reef and a popular dive site named the "Elbow". Here coral formations show some of the same signs of stress as the more well known barrier formations to the north. The elbow can be described as an open framework of rock primarily covered with encrusting zoanthid anemones. encrusting and erect gorgonians. and fire coral. with some scattered stony corals. It should be noted that the stony corals on the elbow. away from any prop- wash impact zone appeared to be more stressed than the same species found on the rim of the dredged craters. This stress was manifest by the whitish edge of the "Elbows" fire coral colonies. Visual indication of coral death on the reef was also observed within the center of the reef : some coral knobs here had algae growing on the stressed whitish areas. an indication of coral death. Other scattered corals appeared to be dusted by a white powder. This anomaly seemed to be caused by the coral tissues drawing away from their septa (thin upright carbonate plates normally within the coral polyp tissue). This appearance is not normal for corals. Other corals had a light dusting of silt. which would suggest that the colony was in such a weakened condition that the organisms were unable to naturally transport the silt. When the silt was fanned off of the coral the same white powdery appearance was observed. Again. none of the corals in the blow hole areas had these anomalies except for the partially

bleached specimen described above. Coral colonies on the other patch reefs in the vicinity of the blow holes appeared healthy.

EXPERT IMPRESSIONS OF PROP- WASH AREAS

It was the immediate impression of the survey team that the bottom topography of the buoyed site at Coffins Patch was indeed impacted by the effect of the salvors prop- wash technology. The general appearance of the reverse topography in the rock/rubble diving area was startling on first sight because it is not natural with the pattern of overlapping and random independent blow holes. The prognosis for resedimentation is however good; the littoral drift of sand and silt should within a reasonable amount of time consolidate into the depressions. This holds true as well for the blow holes in the sandy patch areas with some grass beds. Here the physical process of resedimentation of the holes as in the more rocky areas was occuring as the team performed the survey. We intend to periodically resurvey the area and describe the physical changes underway as they occur over time.

HABITAT QUESTIONS

There is a school of thought in the marine sciences and ecology that any change to a natural system is in and of itself no good. We all realize that man has variously impacted his environment, sometimes for the good, but generally for the worse. (For a full treatment of this subject see the Chapter on south Florida Ecology) We must however examine mans impact on the environment with an open mind and place blame for the state of the environment on the real culprets; not taking an easier course of action and creating scapegoats out of individuals because we do not admire their line of work or the fruits of that work.

As to the impact of Treasure Salvors on the Coffins Patch eco system two interum qiestions must be posed before the a final evaluation and opinion is postulated at the end of this study. First, was Coffins Patch a peace of bottom topography of unique ecological value with a rich and diverse natural population to make it any way unique within the wider offerings of the Florida Keys natural habitat. Second, could the creation of the craters and blow holes made by the Salvors prop- wash technology in any way enhance the bottom community in the survey community.

The answer to question one. is Coffins Patch a unique piece of bottom topography. The answer within the wider comparative natural demographics of the Florida Keys is no. Over time Coffins Patch has been dredged. used as a gunnery range by the Navy. and a dump for refuse by the builders of the overseas highway. All would agree. except for the most hardened environmentalist that bomb ranges and dumps where construction materials such as culverts, railroad ties and concrete block stone quickly becomes artificial reefs and a rich habitat for a widely diverse aggregation of marine organisms.

It is the opinion of the survey team that the prop- wash generated blow holes were in fact becoming the same as the above described rubbish dumps- an unplanned version of an artificial reef.

What was the evidence of this theory of bioenrichment. As described above the rather open terrain of undisturbed Coffins Patch (sandy terrain broken up by patches of raised turtle grass and intermittent rubble) was much like an open prarie. Here larger marine species. mackeral. snook, schooling mullet moved quickly over the terrain finding shelter only in areas such as tidal cuts between areas of stable turtle grass and shifting sediment. Smaller. slower moving. and more vulnerable marine species were to be found in the barrier coral systems where elevation and craggy relief provided a protective habitat for reef and other open water species during their early more vulnerable stages of growth. What the survey team found was that the blow holes partially filled with rootless turtle grass was becoming a habitat for a diverse variety of small marine species. This was also true for the area described above as a rubble area. devoid of sand and sediment displaced by prop-wash action. but providing areas of raised relief shelter. Here fish life of all sizes up to 24 inches were found in abundance and with diverse species variety. Species obsewrved included wrasses. butterfly fish. tangs. grunts. damsels, groupers, parrots. and angel fish. Again few of these reef species. abundant on the Elbow and the prop- wash impacted area could be found in the natural terrain of pre impact Coffins Patch. The presence of extrensive fish life indicates that the rubble and hard habitats exposed by the mailbox activity are very attractive to fish. This area should also attract spiney lobster of all sizes. thus adding to available lobster habitats. All of the above described species were present on the Elbow. however not in the more open areas of Coffins Patch. Destruction of turtle grass. either by direct. or oblique displacement by prop- wash

was observed: nor was damage to grassy areas observed by sediment transfer.

COMMENTS BY DR. FEDDERN ON COMMANDER BUNN DECLARATION

This material with only some editing is taken from Feddern report and is included verbatum. Referal to Bun declaration if needed is found in attatchen appendex volume.

Commander Bunn does not say if the holes he examined were in the sand area or the rubble area. nor does he give hole depths. A piece of live fire coral would have had to be at the substrate surface before the whole was blown. If it were dislodged. it would have to be growing on a piece of rubble. Fire coral grows rapidly on avarietyu of objects including sea fans. bridge pilings, coke bottles, monofilament fishing line. chunks of concrete. old shells, etc. I have even seen a sneaker partially covered with fire coral. A piece of fire coral percehed on the edge of a hole will live quite nicely, and spread to other pieces of rubble close by.

If the holes examined by Commander Bunn were in sand. then the gorgonians he mentioned probably drifted in from elsewhere and were trapped in the whole. (Gorgonians adapt better to rocky substrate rubble then to sandy terrain) ?

Although it is true that the Coral Fishery Management Plan developed under the Magnuson Act prohibits coral harvests or distruction (it doesnt appear to say anything about damage) it specifically allows the capture. retention and killing of stony corals by the scallop fishery or by permit. The plan also allows incidental. unintentional. capture as long as the corals are immediately returned to the water. (see attatched appendix excerpt from the coral management plan)

* note- the question is what is the impact of prop wash on stony corals. are stony corals a protected as well as endangered species. May stony corals be taken for use in aquarea.

COMMENTS BY DR. FEDDERN ON ERVAN GARRISON DECLARATION

Dr. Garrison. when he uses the word "corals". doesn't indicate whether he means stony corals (prohibited) or soft corals (gorgonians). The harvest of soft corals (other than sea fans) is legal up to 50,000 colonies per year in Federal waters and unlimited in State waters (until the Federal quota is reached). harvests of sponges in unlimited numbers is legal in both Federal and State waters. i do not know of any laws that prohibit the harvest of turtle grass. My purpose in saying these things is that what Dr. garrison is trying to describe as resource damage is really equivilant to fisheries harvest of legal organisms. I did not see any cultural artifacts other than a large concrete disc with eye bolt. probably used as a buoy anchor.

* Note- Here the question may be is fisheries damage different than salvage generated damage. If marine organisms are in fact damaged. but that damage is within legally prescribed harvest limits. is that damage or something else.

I feel that the basic question that needs to be answered is: What constitutes damage? The comments by Commander Bunn and Dr. Garrison imply that killing a relatively few legally harvestable organisms constitutes habitat damage. This viewpoint. if applied to any commercial or sport fishery. would require that that activity be banned. since the activity removes from the habitat those organisms harvested. The removal is accepted because harvest supplies a net positive benifit to society.

* Note- The question posed here is does marine salvage and treasure hunting provide a net positive benifit to society.

The culvert that was recently installed under U.S. 1 at the north end of Marathon is definately "damaging' the environments that presently exist at each end of the culvert. The environments are being damaged (changed- impacted) under the influence of increased water flow. and will eventually become less polluted and stagnant. and very different from what they had been. This is an example of impacting (damaging) an existing environment in order to cahange it to an environment more beneficial to people.

A ship sunk as an artificial reef certainly damages the bottom over which it sits. Iron dissolving into the water can change the water chemistry, especially close to the metal. This "damage" is accepted because the ship enhances the topography, attracts fishes, and gives tourist divers additional places to dive, thus taking some diving pressure off the natural reefs.

Mailbox holes change the topography of the bottom, at least temporarily. No longer is there a uniform sand/grass bottom essentially devoid of fishes (because it is devoid of solid shelter). The chanhe increases the diversity of habitats in the area.

Whenever I swim along a grass, sand, or flat bedrock area and I suddenly see a few fishes, I know there is a shelter nearby. Every time I swim past the fishes, fish life becomes more abundant, then I encounter either a coral head, a large rock, a set of holes in the bottom, or a piece of debris, such as a refrigerator, car, etc.

The blowholes with their rubble rims show dramatic increases in fish populations over the nearby areas. Although research has shown that a large percentage of the medium and large fishes has probably been attracted from the surrounding area (showing that the fishes prefer the didturbed habitat), the very young fishes probably recruited directly from larvae in the water column.

Scientific studies (see attatched sheet) have proven that loose rubble can be bound together by sponges, cemented together by calcareous algae, and then settled by stony corals, all in a period of ten months.

The primary mechanism that returns the blowholes toward their previous habitat is sand transport under the action of wave surge induced by storms or hurricanes. The sand eventually fills the holes. If the rubble remains at the surface long enough , it will form the base of a new coral patch.

CONCLUSIONS BY DR. FEDDERN

My conclusion from what I have observed is that the "damage" done to a small portion of the relatively barren Coffins Patch environment is more than compensated for by an increased diversity of habitats, and an enhanced productivity of thoise organisms sought after by people.

ADDITIONAL COMMENTS TO CONCLUSIONS

The intent of the establishment of the FloridaKeys national Marine sanctuary was to halt the degredation of the coral reefs, enhance the habitats, and thus restore the reefs to their former glory. managing an area to restore a former environment requires a different management plan than one developed to maintain an existing environment. Restoring an environment requires that an existing environment must be changed in desired directions. Enhancung biological diversity is a desired direction. by whatever means it can be accomplished. Congressman Dante fascell vowed that no one would be put out of business by the Sanctuary.

I feel that because of the potential for damage when a mailbox is used by inexperienced or unethical operators, that a series of experiments be done by using mailboxes. in order to develop a set of operating parameters that will enable artifacty recovery to be accomplished while minimizing the undesirable side affects such as the scatter of light weight artifacts. These experiments will educate and reassure people concerned with recovery of the stressed ecosystem in the Florida keys that mailboxes can be used responsibely in a manner that helps the Sanctuary attain its goals and objectives.

CULTURAL RESOURCE DAMAGE ASSESSMENT

On May 20 1992 accompanied by Dr. Henry Feddern and a support crew from Middle Keys scuba center we performed a physical survey of the Coffins Patch area described in the previous section

ANALYSIS OF JOHN GIFFORD DEPOSITION IN KEY WEST FEDERAL COURT

DR. Gifford was deemed a qualified witness by the Court and testified as follows.

Dr. Gifford was asked. 'do you have any experience in the field of carbonate sedimetology." 14-16.

Dr. Gifford testified that he had written a thesis on the subject. specifically. 'the carbonate sediment of Bimini and the Bahamas." where he also did 'did extensive research on that subject in the Bahamas and in the Florida Keys". 17-19

The witness was asked - " What is the purpose of studying that field". 25 as well as. "And what function does it have (carbonate sedimentology) in archaeological research". The witness answered that "Well. in the case of shipwrecks in the Florida Keys. the shipwrecks are essentially buried in a matrix of carbonate sediments. So it is important. as has been pointed out in a number of publications. that one understands the geological sedimentological matrix. in which the shipwreck is embedded."

COMMENT - Dr. Gifford was quickly qualified as a witness in both marine archaeology and marine geology. the question dealing with carbonate sediments and shipwrecks was asked to set the stage for later questions that would show that prop wash technology indeed can blow holes in the substrate.

The witness was asked. How important are the Florida keys in an archaeological perspective.

The witness answered "They are interesting because of the geography and history of the European colonization of the Western hemisphere and the fact that a great deal of the trade and traffic between mexico and the Carribbean actually passed through the straits of Florida on its way back to Europe during the Colonial period. - As a result - a fairly large number of those vessels were wrecked on the reefs and shoals of the Florida keys during the 16th through the 20th century." The witness also testified that the keys were important within the wider field of the maritime history of North America. and that the keys the Florida keys are the site of a very large percentage of these shiopwrecks.

COMMENT- The witness has set the parameters of Spanish Colonial and wider European navigation in historic times in the northern carribbean. the Straits of Florida and the New bahama Channel separating the Florida peninsula from the bahama islands. It is true that the Florida Keys contain a good representative array of historic shipwreck remains .

It should be pointed out. as it was done in the preceeding narrative. that very little marine archaeology has been carried out in the Florida Keys. with the exception of cursory work by Mendall Peterson of the Smithsonian. and the good work done during Fisher's work on the Atocha- Santa Margarita.

The fact that the State of Florida and University or Private Institutions did not carry out Cultural Resource Investigations in the Florida Keys during the Art Mc Kee era is regrettable.

The witness was asked to describe - "How a marine archaeologist goes about locating and excavating a shipwreck.

The witness described general survey techniques. magnetometer. side scan sonar etc. The witness then stated that "Once you have found a particular wreck you would then proceed to excavate which is analogous to excavating a land site."

COMMENT- The witness is describing one model of shipwreck excavation. This methodology may be carried out in a situation where the archaeologists are working in a stable environment at a reasonable depth where the physical processes of wave, wind and tide are not extreme. In a coastal zone situation where a marine site is now terrestrial. or a tidal site where a coffer dam may be used to protect the site from the elements. The witness speaks of marine archaeology being analogous to the terrestrial model. This is so in a theoretical sense. however anyone who has worked a land site can relate the difficulties encountered in the marine environment. If this analogy were true. shipwrecks in the marine environment would worked as routenely as land sites.

The witness was asked if he was familiar with prop wash deflectors. (mailboxes) in marine excavation. The witness replied that he had read about such devices. seen them in use while flying in an aircraft . and seen a videotape of such a device underwater.
When asked. "Who typically uses a mailbox to do marine excavation". the witness answered. "It is my understanding that these are used by treasure hunters or salvors".

COMMENT- Prop wash technology is merely a method of displacing sediment. In the section of this report discussing prop wash technology it was pointed out that prop wash was used by oysterman to displace sediment from fragile shell fish beds. This use

of prop wash does not destroy the sensitive eco system of shell fish beds. It follows then, that a light, to moderate dusting of prop wash on an historic ship wreck, or a site that contains ship wreck materials, could be controlled down to acceptable levels of tolerance. It is also standard operating procedures for archaeologists working in inhospitable climes where winter weather precludes field work to use prop wash technology to cover a "working site" with a protective coat of sediment and at the beginning of the next season to displace this buffer with prop wash. This technique has been used effectively by archaeologists in New England. The Department of Commerce. National Oceanic and Atmospheric Administration (NOAA) lists prop wash technology as an acceptable technique in cultural resource management. The State of Florida marine archaeologist has used prop wash in State sanctioned excavations in northwest Florida. Former State of Florida Archaeologist Carl Clausen was on site during the excavation of the 1715 Fleet off the "Treasure Coast" of Florida where prop wash was extensively used. In Cultural Resource archaeology prop wash technology is routenely used to search quickly and cost effectively where there are anomalies that may indicate the presence of ship wreck materials. To sum up, properly controlled, prop wash technology is a useful technique to be used in archaeological excavation.

The witness was asked, "Do marine archaeologists generally use mailboxes." The witness answered, "No the use of a mailbox or blaster or blower is contrary to one of the fundamental objectives of doing research which is recovering as much detail and information as possible from a site whether it is a land site or a shipwreck"- The witness further argues- "the amount of energy involved in blasting away the sediment is so great that it simply blasts away all the cultural material that makes up the shipwreck. And so you have lost a very valuable piece of information which is called context in archaeology. And that is the relationship amongst the artifacts and the relationship of the artifacts to the sediments and to the ships hull itself." Further Gifford testified to context- "It refers to exactly where the artifacts were located in 3 dimensional space, their relationship to the strata that are present and their provenience, where they originated from".

COMMENT- To answer the above question another way- marine archaeologists would use the technology as described in the previous commentary. When Gifford testifies about 'recovering detail", that detail would be important in what is called a primary site; that is

where the ships hull is in on place. generally intact and the cultural materials would be found in-situ. much in the same positions as they were at the time the vessel was lost. At this juncture it should be pointed out that Mel Fisher and Salvors have carried out extensive remote sensing activities in the Coffins Patch area as they do in all of their other salvage areas. Mel Fisher and his employees would undoubtedly know whether they have a primary site or merely shipwreck scatter. Coffins Patch is thought by knowledgable salvors to be a scatter zone. where shipwrecks deposited their remains over a wide area of bottom: therefore there was little chance that the witnesses 3 dimensional model exists at Coffins Patch. Context. relationships, and associations are fundamental to doing good archaeology. In this case the scattered shipwreck debris. if present would represent a kind of context and would be collected. recorded, and charted giving a viable picture of the wrecking process. an important archaeological consideration. Here the only cost effective and reasonable way to salvage is with controlled prop wash technology followed by ground truthing by divers with hand held metal detectors. Yes uncontrolled blasting with prop wash moves artifacts.

Declaration of Dr. Robert Baer

Dr. Robert Baer declares that:

1. I am a Cultural Resource Management specialist on the staff of Sea Systems Corporation of Pompano Beach Florida. I have Doctorate and Masters Degrees in Public Administration from Nova University. My area of concentration and specialization is CRM. I have a Masters degree in East Asian Studies from the University of Miami Center for Advanced International Studies concentrating on the art and archaeology of East Asia. I have a bachelors degree from the University of Miami with a major in the Humanities and a minor in biological sciences. I have further advanced level coursework in Ocean Science and Coastal Zone Management. I have taught a wide array of management courses at the Doctoral level at Nova University where I hold the position of Associate Professor. My teaching specialization is Public Policy, and Comparative Government. Professionally I have completed a number of Cultural Resource Management studies for Sea Systems and other engineering companies.

2. On Wednesday May 21, 1992 I visited the area off of the Florida Keys known as Coffins Patch. I was accompanied by Sea Systems Corp Vice President Mr. Bill Sadler, a Ocean Engineer and Mr. John Coates a Sea Systems Surveyor. Accompany the Sea Systems personnel was Marine Biologist Dr. Henry Feddern. Also aboard the 30 foot dive boat was Mr. Geof Chapman a representative of Salvors Inc of Key West Florida.We were taken to a buoyed area in Coffins Patch consisting of one surface buoy and two sub surface buoys. Dive Boat Captains were Richard Boileau and Lindsey Burpee. Dive Boat was positioned on site utilizing Loran coordinates.

3. Once anchored near Coffins Patch buoys a survey of the area began. Dr. Feddern began a biological survey of the bottom (see enclosed report) I began a surface survey of the area by swimming. The depth of the water was no more than twenty five feet. Visibility throughout the survey approximated thirty- five feet. The purpose of the surface survey was to ascertain the number and extent of alledged excavated trenches and depressions in this limited area of

Coffins Patch. On this surface swim of approximately one hour I located a number of depressions as well as more distinct holes in the area of the buoys. Following my surface survey I donned SCUBA gear and returned to the water where I accompanied Dr. Feddern on his bottom survey. I am not a qualified biologist, I do however concur with With Dr. Feddern's physical description of the area. I observed him measure, count biological species and take notes on an underwater slate. Prior to the dive I asked Dr. Feddern to notify me of any cultural materials that he might encounter on his survey.

4. My own bottom survey, most specifically in that area around depressions and buoyed holes was to ascertain the presence of cultural materials of an historical nature. In the approximately two and one half hours underwater, over three separate dives in two separate locations I located only modern debris. Dr. Feddern pointed out a round doughnut shaped object with a metal ring which we concurred was a mooring buoy of modern provenance. No other materials were found. Hand fanning was used to displace bottom sediments both around the rim of the depressions and within the confines of same. Visibility within depressions whether considered to be natural or manmade was made difficult by the presence of natural detritus. Several sea fans were found in one of the depressions; the nature and cause of their deposition is unknown at this time.

5. I wish to point out that prop wash deflectors (mail boxes) are an accepted tool in Marine Archaeology, and a sub specialization of this discipline Cultural Resource Archaeology. Prop wash technology may also be used in shipwreck salvage utilizing archaeological guidelines. This has been recognized by the Federal and State government and the use of prop wash deflector technology is addressed in the NOAA diving manual. In the course of my professional work I have personally been a member of a team which utilized this technology and am of the opinion that used properly in the natural environment this technology need cause no adverse impact. It must be stressed that any technology or tool may be abused, and this is true with respect to prop wash technology. It is my further considered opinion that field testing of this technology under controlled conditions within the waters of the Florida Keys would result in guidelines acceptable to conservation and private sector interests alike.

6. It is the recommendation of Sea Systems Corporation that Salvors Inc must be given additional time to respond to the present Federal

Law suit. We are prepared to complete with reasonable speed and at depth a report which addresses the following.

(a) Mitigation models for species affected by salvage operations.

(b) Field testing of prop wash technology under controlled conditions by marine archaeologists.

(c) User guidelines for prop wash technology. Technical model for archaeological guidelines in the Florida Keys.

(d) Ecological study of Atocha - Margarita site where prop wash excavation was previously used. (Before and after study)

(e) Side scan and hydrographic survey of prop wash holes to ascertain rates of sedimentation. (Healing time)

(f) 1715 Fleet salvage operation to study the ecological effect of disturbed vs undisturbed site. (Dr. Feddern suggestion) Concomitant sandy bottom to rubble study as new habitat biodiversity question - Does new rock result in additional habitat.

(g) Task force group, interdisciplinary in skills composed of various interest groups to set goals work out long term objectives and recommendations.

Thanks to Dr. Feddern who carried out this initial field study and prepared his report within 48 hours of notification.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 21 May 1992.

Robert H. Baer

The Honorable Hubert Ingrahm
Office of the Prime Minister
Nassau N.P.
Bahamas

January 19, 1993

Dear Sir

The utilization of prop wash deflector technology, commonly known as the "mail box" has been misunderstood as a methodology in the removal of sediment and overburden in the recovery of "cultural resources" in the marine environment.

It should be understood that prop wash deflection as a method to displace sediment has various applications modelled on the technical situation or problem encountered on site in the field environment. It should be noted that prop wash technology is included and described in the 1991 National Oceanographic and Atmospheric Administration (NOAA) Dive Manual as a viable field technique in marine archaeology. Prop wash deflectors have been successfully utilized in the field by marine archaeologists and ocean engineers in the coastal waters of Florida, Texas, Louisiana, and Massachusetts.

Prop wash technology is not a new technique, and has been used very successfully for years in the Chesapeake Bay marine environment to "dust off" encroaching sediment, harmful to

economically valuable shell fish colonies. The same technique has been utilized with success to remove drifted overburden from and around delicate coral reef communities.

In an archaeological and cultural resource context, prop wash technology may be utilized to cover a marine site with sediment at the end of a field season to protect the site from looters as well as from the natural processes of bottom erosion. Conversely, at the beginning of the next season, prop wash technology may be utilized to remove that same overburden so field work may continue. In cultural resource assessments, prop wash deflection has been used with great success to probe sand borrow areas to ascertain the presence or absence of objects of cultural importance. Once located through the utilization of prop wash, these sites may be documented and protected from the potentially harmful effects of beach nourishment dredging projects. Prop wash technology applied with caution and restraint may be utilized to remove many tons of overburden quickly, more cost effectively, and most importantly, with greater environmental safety than other commonly accepted dredging techniques.

Prop wash technology utilized with other sediment removal techniques such as air lift, hydro lift and water jet may be modeled and utilized in the marine environment with success by marine archaeologists, ocean engineers and commercial salvors alike. The key to the utilization of any sediment removal or dredging system is prior planning that includes care and restraint at whatever level the recovery or displacement model dictates.

Governments in partnership with archaeological salvage and recovery operations should understand that the only practical, cost effective method of removing centuries of overburden is to properly, carefully, and responsibly utilize prop wash systems to remove the tons of extraneous sediments impacting the cultural resource or other buried object being investigated. This holds true for fragile archaeological sites or sites being probed pursuant to beach nourishment operations.

Restraint, due care, and planning are the keys to the utilization of any technology, including prop wash systems. Again, this technique has been used with great success and with no measurable negative environmental impact by responsible organizations which include

universities, government agencies, private research and exploration corporations, and salvage companies.

A communication of this length can not definitively explain or describe any technical system. Further supporting documents, individual verbal testimony or on-site demonstrations of any sediment displacement method may be arranged through this writer, a consultant to Sea Systems Ocean Engineering Corporation, Pompano, Florida.

Sincerely,

Dr. Robert H. Baer
Associate Professor of Public Administration
Cultural Resource Archaeologist

Coffin's Patch Manuscript - Source Material

Forward

March 28 1992 - Florida keys keynoter - Collectors protest regulation under marine sanctuary - Feddern - Marine life fishing is now a liscensed fishery and must be treated like any other. This is a good article because it is a taste of what was to come later.

Duke Long letter to the editor - When a sanctuary isn't a sanctuary- more pros and cons.

Declarations - These sworn statements were proffered as survey evidence that Treasure Salvors was adversely impacting the Coffin's Patch area.
April 15, 1992 Harry B. Jackson - Law enforcement Officer for the National Marine Sanctuary.

April 15, 1992 - Alan R. Bunn - Lieutenant Commander NOAA Corps- Sanctuary Manager of the Key largo National Marine Sanctuary.

April 16, 1992 - Steven J. Golden - Officer Florida Marine Patrol.

April 22, 1992 - Ervan Garrison, Marine Archaeologist, Office of Ocean and Coastal Resource management's Sanctuaries and Reserves Division of NOAA

April 22, 1992 - Memorandum In Support Of The United States Motion For A Preliminary Injunction - Case # 92- 10027 - Civil King Conclusion - The Court should issue a preliminary injunction enjoining defendants from further dredging and salvage actrivities within the Florida Keys national marine Sanctuary until trial or other disposition of this matter.

Late April - Miami Herald Article - Keys Treasure Hunt Goes To Federal Court - U.S. Mel Fisher spar over impact.- Article has interesting chronology of Treasure Hunting in the Keys.

April 25, 1992 - Memo from Dr. Baer to Mel Fisher - Subject: Coffin's Patch Environmental Impact Assessment.

May 8, 1992 - Fax from Mel Fisher to Dr. Baer - Mels Wrecking Theory - This is the theory that we may have to call creative distruction in light of the NOAA - conservationist argument that "any change or impact is bad".

May 12, 1992 - Memo to Dr. Baer, Reef Expert - Memo from Dr. Feddern outlining possible damage and mitigation model for Coffins Patch.

May 13, 1992 - Miami Herald - Sea Hunt Heads for Court - U.S. Fisher clash over treasure salvors methods - Magistrate will weigh Keys case. Good overview of govt vs Fisher

undated - Judge Blocks Fisher Project - Good overview of the Marine Protection, resource and Sanctuary Act - They took action before a management plan is designed and adopted.

undated - Editorial - Let's Get On With It. - Lets get the Florida Keys Marine Sanctuary Management Strategy Workbook. - Chapman "How can we salvage without the technology.

undated - Key West Citizen - Fisher's method for salvaging debated`in court - Zieman testimony in full - quotes such as Ross perot does not have enough money to restore that in our lifetimes- Gifford - mailbox technology removes the artifacts from their context.

May 21, 1992 - Sea Systems Corporation Physical Survey of Coffin's Patch - Rresearch Vessel from Middle Key's Scuba performed full day survey of Coffins Patch - Survey performed by Dr. Robert H. Baer, Cultural Resource Archaeologist and Marine Biologist Dr. Henry Feddern. Treasure Salvors representative on site Geoff Chapman.

June 10, 1992 - Confrontation Looms in Keys - Horan argues attack and Govt success against Mel Fisher will impact all other Treasure Hunters "If he fails all others will fail . Horan says it's another attempt by government bureaucrats to gain control over historic shipwrecks'.

Undated - Monterey Bay - Bush Approves Nation's Largest Marine Sanctuary

June 23, 1992 - Letter from Dan Wagner to Ben Haskell NOAA, Wash D.C. - This is a concerened citizen letter to bureaucrat from a water user in the Keys. wagner gives his own visual assessment of the alledged damage to Coffins Patch.

July 1, 1992 - Draft of NOAA National Marine Sanctuary Program - Site Evaluation List - Florida Coral Grounds - Rationale for consideration of the Treasure Coast geographic area as a National Marine Sanctuary, with maps and charts. Comprehensive and all inclusive this document shows that the FED has put a lot of time and effort in planning and projecting new Sanctuary areas.

July 21, 1992 New York Times News Service - Treasure hunters government at odds over ban on hunting - Overview for outsiders on the NOAA - Mel Fisher law suit. Points to an early 1993 settlement or decision from the court. Quotes Monroe County Commissioner Doug Jones, who is a treasure hunter and museum owner.

July 21, 1992 - Letter - Fla Institute of Oceanography - Zieman on water quality and downdrift into the Florida keys of polluted water from the north.

undated - Judge Blocks Fisher project - NOAA says they dont' know how many treasure huntres use mail boxes.

undated - No more holes in sea bottom Fisher warned - Federal Judge issues ruling - Causey - If they want to dig holes, they'll have to apply for a permit Causey said if they want to dig holes they will have to apply for a permit.

undated - Conch Coalition creates chaos - There is no ban on Treasure hunting says NOAA - "If a reasonable opportunity for discovery exists a permit will be issued for salvage within proper ecological guidelines". Because of the Fisher suit, any salvage will have to be held in trust until that suit is resolved".

July 24, 1992 - The Keys - The Miami Herald - Sanctuary Opponets Unleash Ire - Coalition protesters block highway briefly hang leaders in effigy - Fisherman have been alarmed because the National marine Fisheries Service is considering creating two 20 mile wide no

fishing zones off of the keys, which would be coordinated with the sanctuary.

July 25, 1992 - Florida key Keynoter - Irate Residents Confront Marine Sanctuary Advisors. Conch Coalition takes on NOAA at meetings. Good overview of the response of user groups as minifest through the coalition.

July 25,1992 - Florida Keys Keynoter - Fisherman predict doom for future of lobstering Why Florida Bay is dying and why this is the root of the decline of the fishing industry.

July 28, 1992, Tuesday The Key West Citizen - Judge Issues Injunction against Fisher - Salvaging Method Must be Stopped In Keys Sanctuary. also Sea Craters CreateComtroversy in Keys. Good articles on the use of Mailbox Technology and the limiting of the only practical method of removing substrate in an area such as Coffins Patch.

July 28, 1992- Ft Myers News Press - Kevin Lollar Articles - Sea Craters Create Controversy in Keys - Fisher says NOAA may be looking for treasure. Keys residents up in arms over marine sanctuary plan.

July 1992. - One Mans Treasure - Doug Jones adds to his button collection - Monroe County Commissioner and Treasure Hunter takes on the establishment.

July 1992 - Editorial - reef may be gauge of life - Brown Growth is Killing Coral - Briam LaPointe Harbor Branch Biologist. destruction of coral heads by water with high level of nutrients. the fragile ecosystem once in equalibrium is now out of control. What is the cause.

undated - Protesters fight sanctuary rules - Bringing the coconuts to the meeting - Lack of Hurricanes Affects Sea Grasses - Good Zieman quotes. Compare and contrast with his court testimony.

Undated - Expanding Coral Grounds sanctuary Would be Treasure-Hunting Disaster - moving the sanctuary northward to include the Sebastian Area - argues that propwash does not adversely impact eco system, its dirty water and other pollutants.

Undated - Guest Editorial by Dan Wagner - In Response to last months Con in Florida Scuba News - a defense of Mel Fisher and Treasure Hunters.

undated - My name is Jeff Chapman statement. Discusses Monterey Bay.

Sept 14, 1992 - Chapman represents PRIDE in Washington D.C. as Lobbyst- The letter of appointmrnt for Chapman and the PRIDE Preserve Our Right To Discovery and Exploration - Organization goals and asperations.

undated - Fishery Council plans creating marine reserves - NOAA sponsored meeting reference ways to help over fished snapper and grouper populations.

undated - pollution may be responsible for reef alge - Now its in the Keys, the alge bloom that threatens the east coast is now appearing as far south as lower keys and Marquesas.

undated - Teddy Tucker: Pioneer T - Criticism of Treasure Hunters by the marine archaeologists.

undated - Causey and Barley hung in effigy.

undated - Entire fishery shutdown can happen here - The director of the SOutheastern Fisheries Association claims all fisheries industries face the same kind of constraints as northern cod fisherman in the Canadian province where federal officials halted fishing for cod recently.

The exhibits are such photographs as have been or will be exchanged by both Plaintiffs and Defendants.