

HAWAII - KAUAI - MAUI I

GEORGE BALAZS

1983-1985

2 of 2

G. BALAZS

MAUI - BOOK I

MAY 1983 PUBLIC MEETINGS

KAUAI

Another lady GAIL WEIR said lots of turtles are seen down Aliomanu Road, mile 15. She lives in a "colonial style" house near here.

In Sept. of a year or 2 ago, Dan Moriarty saw tracks and digging on a small sandy beach spot at Makapili. There is a small rock island offshore and during the summer sand forms between here and the main land. Washes away during the winter. Hard to get to from land. Apparently you must go to "stone quarry" first.

(Note: If eggs were laid in Sept, waves probably washed out sand before the eggs had a chance to hatch).

Kit, Dan's FWS assistant, said he was fishing off Kilauea, threw remaining (squid) bait in the water, and watched it be eaten by a large green turtle.

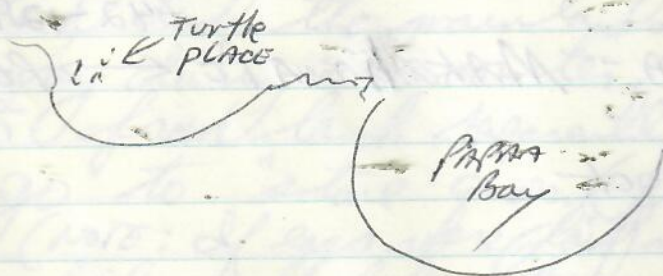
DAN IS A FRIEND OF GEORGE RAY-SPIA  
 During discussion with Linda Moriarty ( maiden name PAIK - part Hawaiian, and Korean). Her father (~70+ years) and 2-3 brothers. Used to set net across Amini Bay. A place  
 (cont p. 59)

5:30pm MEETING AT FATHOM 5 DIVE SHOP - KOLOA

1. Les<sup>LIE H.</sup> Rena - President - KUA  
P.O. Box 1813, LILUAE, HAWAII
2. Jim GRATHAM - RR#1, Box 416, KOLOA 96756  
742-7431
3. Thane Taylor P.O. Box 21, ANAHOA, HI 96703  
822-5265
4. Mike LAY RR1 Box 167 KOLOA 742-9484
5. Terry O'HALLORAN Box 907 KOLOA 96756  
742-1290
6. Study AREA - MAKAHUENA Pt  $\longleftrightarrow$  Pt. Allen
7. Don HERCOCK

there where freshwater comes out  
and turtles occur. Linda saw  
dig and eggs in sand areas along  
Anini. Dan confirmed heavy  
take during 1960's due to restaurant  
trade - Jets & scuba.

A lady (name \_\_\_\_\_) told  
of seeing a turtle caught by  
hook and line. Asked what to do in such a case.



Dan reported copulation off  
Kilauea Pt 3-11-84 (card in file).

3/14

A Barbara Morrison  
 P.O. Box 1021  
 Hapalei 96714

wrote for me - "Go to Prineville -  
 to Punahele Road - almost to end of  
 street - turn right & park - trail  
 goes about 1/4 mile to rocks -  
 turtles usually feed around 3-3:30pm.

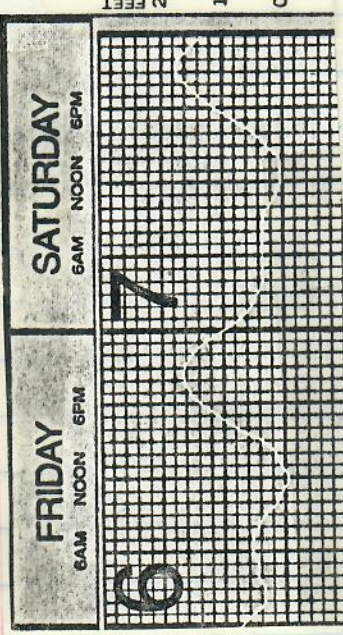
Although at Dan's, I drove quickly to  
 Pali-ke-kua - Prineville cards. Big leaves  
 smashing in. Drove back to Hoopa  
 for a meeting. Afterwards, saw Carlene  
 and Frankly for about 1 hour.  
 Didn't have time to visit Alerton's  
 place at Lawai kai. Departed on  
 Mid-Pacific at 8:20 pm.

3/14/84

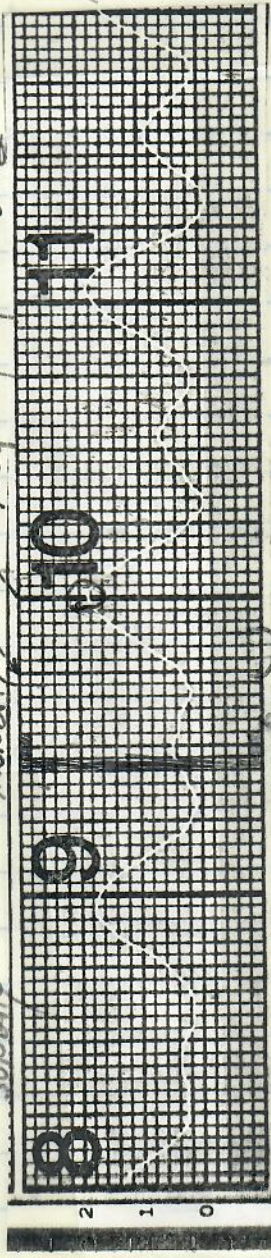
K

P  
R

APRIL 1984



SUNDAY MONDAY TUES



**MOON PHASES**

NEW MOON APR 1, 30	FIRST QUARTER APR 8	FULL MOON APR 15	LAST QUARTER APR 22
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For tide time at following places, add or subtract from Honolulu time.

PORTS	Mins. Minus	Mins. Plus	
HANALEI BAY, KAUAI	-1 40	KAUNAKAKAL, MOLOKAI	-0 09
KAWILIWI BAY, KAUAI	-0 32	KAHULUI, MAUI	-1 48
PORT ALLEN, KAUAI	-0 32	KIHEI, MAALAE BAY, MAUI	-0 14
HALEIWA, OAHU	-0 35	HILO, HAWAII	-0 59
HANALEI BAY, OAHU	-1 35	HONOLULU, HAWAII	-0 24
KAIKOEHE BAY, OAHU	-1 48	MAHUKONA, HAWAII	-0 24
KAIKOEHE BAY, OAHU	-1 48	KAIKOEHE BAY, HAWAII	-0 24
WAIANAE, OAHU	-1 15	KALAEKUA BAY, HAWAII	-0 16
WAIMANALO, OAHU	-1 15		

NO TIDES SEEN

SEEN

9 APRIL 1984 - 11:30 am depart for Kahului  
 MONDAY Maui Mid-Pacific Airlines - arrive  
 12:20 pm - Dollars #9; Hukilau #23

(579-9616)  
 Rene Sylva telephoned me 4/7<sup>Sat.</sup> morning  
 concerning "school" of "30-40"  
 large turtle "at 300 lbs" seen starting  
 - 2 weeks ago in front of discharge  
 water of Maui Power plant.  
 I telephoned Gene <sup>ANSW. SER.</sup> Wilham at NMFS  
 Cordo, Kihui 879-9987, he made  
 contact with Rene and met him  
 to see the turtles <sup>Sat.</sup> night. Rene originally  
 said to me "they looked disoriented".  
 Gene confirmed 20+ turtles - looked to  
 him like they were coming in from  
 the offshore reef. Gene went Sub. <sup>- 6 pm and</sup> saw again  
 ~ 1:30 pm I arrived off powerplant - noted  
 small opihia, very strong wind;  
 adjacent Matson's containers yd.  
 4-5 fishermen for papia adjacent  
 to road. Noted Pleurocladia growing  
 immediately upstream of discharges -  
 runs over rocks + 2 cement  
 boxes  $\square$  with discharges.  
 None along rocks here, but other  
 kinds of algae are present.  
 No turtles seen. Photos of the  
 area taken. Met Gene at

4-9-84 Burger King ~ 3:00 pm. Telephone  
 Monday Earl Helm, supervisor of Maui Electric  
 Plant, subsid. of Hawaiian Electric.  
 Met him at the plant ~ 3:30  
 also Plant been  
 there 37 years; cooling water from  
 deep wells - brackish water. Tubing  
 is copper-nickel; Sewage treatment  
 nearby installed 2 years ago -  
 water here injected into the ground.  
 He feels this must be getting  
 into their cooling water, since  
 corrosion is going many times more  
 rapid. Shut down for cleaning  
 occurs periodically - contaminants in  
 this water must be cleared before  
 it can be discharged.

Steven Coles has all the  
 discharge data. Must be filed regular  
 with EPA. Need - Heavy Metals?;  
 Nitrogen? Temperature? Quantity?  
 The other Electric plant on Maui  
 is an Kihui hot cooling water ponds -  
 nothing goes directly into the ocean.  
 Helm is aware of turtles  
 occurring off the plant -- but not  
 as close to shore as I mentioned.  
 Stated that a FRANK GOMEZ  
 who works at the plant knows  
 all about fishing, etc. - should contact him.



4-9-84

MONDAY

Gene and I drove along the shoreline road past the sewage plant to KAWANA Park; many wind surfers here. Shortly before here there are stone jetties, to apparently help prevent shoreline erosion. Pterocladia and Ulva + other algae growing abundantly on the intertidal rocks.

Windsurfer said she didn't see turtles.

Sat at wooden steps and started watching ~ 5:45 pm. Cold and windy. First turtle seen ~ 5:55 pm by Gene ~ 100' offshore <sup>TO THE</sup> <sub>LEFT</sub> subadult right close in discharge waters.

Over the next hour, prior to the flood light going on, we estimated ~ 6 turtles, none of which were adults. Light went on at ~ 7 pm. Gene arrived. While counting to the left of the wooden steps, Gene said he counted 26 in 3-5 minutes. A distinct area/line could be seen where turbid water ends, clear water of discharge begins. Later we were told that during calm weather water is clear all through here, no such division. At ~ 8:45 pm I suited up and entered the water

4-9-84 SECURITY GUARD FOR MATSON TERMINAL -  
 MONDAY

ALVIN L. BOTEILHO

323 MAKOA PL.

KAHULUI, MAUI - 96732

PH. 244-9882

at the first cement block discharge to the left. Immediately saw a subadult lying still. Grabbed both front flippers - no tag - didn't try to hold it when it wanted to swim off. Proceeded a short distance where the water was clearer - light not used. In this area, I counted an estimated 25 turtles - all seemed to be full sized adults drifting back and forth - some stacked over each other - bottom said with a few smooth rocks - water very noticeably warmer here - Turtle did not flinch by my presence - I felt flippers for tags - thought I felt one at flap, but didn't see it. Checked ~ 4. over a 5 minute period, turtles became fewer due to my presence. Estimated I saw (13) with tumors around head - eye. Several had scalline on scapulae.

4-9  
Monday

Wind blowing strong - but calm underwater. Only 1 male noted, and tail was not full length. After 5-10 minutes, I turned on my light - saw 2-3 others in turbid area, where it was noticeably cooler. After getting out, the security guard Alvin arrived, and expressed concern as to who we were - said he knew about the turtles here "for 5 years" - he has not made it widely known - but did tell some of the stevedores - wanted to know how we learned about it. Also said that families from Maui had come here at night to "turtle watch". Place is "better than Sea Life Park". No turtles are known to have been taken here, but Alvin watches, and if he saw this, he would call enforcement. He saw Gene's car earlier - watch me in the water for 20 min. before coming forward. Thereafter, we watched for turtles in same area - only 1-2 seen, but slightly to the right in more turbid area.

Following our departure at ~ 900 pm, I returned at ~ 11 am - it appeared that many, most, turtles

FRANK GOMEZ - plant worker - reportedly  
- knows all about fishing

4-9-84

MONDAY



REDDY KILOWATT  
Your Electric Servant

MAUI ELECTRIC CO., LTD.  
P.O. BOX 398  
KAHULUI, HAWAII 96732

EARL L. HELM  
KAHULUI STATION SUPERINTENDENT  
PRODUCTION DEPARTMENT

TELEPHONE  
OFFICE: (808) 871-8461  
EXT. 255

had returned (or new ones?).

Needs:

- Take photos
- Call Steve Coles
- Electric plants - on other islands?
- Call Alison Kay-piki
- Additives, volume, Temp., years installed
- cleaning cycle, contaminants, nitrogen
- Sewer processing injection

Notes - Rene and security guard told how  
there used to be an abundance  
of lime off Paea - not so now.

KAUAI

4-10-84 Checked at 6:30am - lots of light -  
TUESDAY saw 1-2 turtles in warm  
water area.

Returned Tropical #9 car and departed on  
Midpacific flight 7:15am - attended FWS  
meeting on Johnston <sup>arrive 7:50am</sup> upon arrival in Honolulu

10 July 1984 Depart for Kauai Mid-Pacific  
TUESDAY at 7:35 am. Rain.

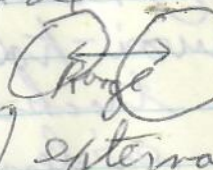
One-day visit to Kauai for the following purposes:

- 1.) Inspect nesting areas reported to me via Dad Monarty / Dr. Arrington (near McBride Mill) and Don Heacock (eggs rolling on beach at Mana-Barking Sands) found by Toni Sanchez.
- 2.) Inspect, tag and release <sup>20</sup> hatchlings incubated by Don from eggs collected at Barking Sands.
- 3.) See Lawai-koi Beach where digs and tracks were recorded - but no evidence of eggs ever found.
- 4.) See Kauai Electric Plant

Other possible activities, if time permits -

- 1.) Call or see Dr. Kikuchi
- 2.) <sup>INTERVIEW</sup> Call Gail Ishimoto - interviews?
- 3.) A/V man at library
- 4.) Call Monarty

Arrive Lihue - 8:15 am - Sunny.  
Picked up by Don and ate breakfast at McDonalds. Proceeded to State

7-10-84 building parking lot where we  
 Tues. together and measured the  
 20 hatchlings that Don had  
 found alive in the eggs last Friday  
 7-6. Jantzen B. was present then  
 and took a photo that appeared with  
 article in the Sat 7-7 Advertiser.  
 The eggs (34 total) that Don hadn't  
 opened last Friday due to  
 "drilled" nature, were dug out  
 of sand bucket and each one inspected  
 of 33 showed advanced, nearly  
 full term development, but embryos  
 rounded inside with yolk  
 only about  $\frac{1}{2}$  All  
 of the <sup>live</sup> hatchling  had a small  
 button of external embryo.  
 1 egg only showed <sup>very</sup> sign of  
 development (yellow yolk)

20  
 + 34  
 + 2-3 Don received from Toni  
 56-57 total?

Drove to Toni Sanchez's house - MRFS  
 Eggs were found in 2 groupings - kids  
 found eggs rolling on the <sup>sand</sup> beach. To  
 see what they are an egg was  
 opened. The next morning no later than  
 8 AM they found the nest site with  
 ~20 eggs exposed. These

HATCHLINGS RELEASED BY

73

TONI SANCITIZ et al. 7-10

EVENING - BARKING SANDS

SIZE 1

MONEL \* all tags placed on rt. flipper

- INSCRIBED "NMFS"

Prefix present??	Tag no.	SE	SW	head width	Remarks
	1. 876	51.0mm	41.0mm		2-3 scale
	2. 877	51.0	40.0		3-4 scale
	3. 878	51.0	39.0		3-4 scale
*	<del>879</del> (20.) 880	50.0	41.0		2-3 scale
	<del>880</del> destroyed				
	4. 881	49.0	36.0		" indent on right
	5. 882	50.0	40.0		2-3 scale
	6. 883	49.0	37.0		"
	884 → tag NOT ON STRIP missing				"
	7. 885	48.0	37.0		"
	8. 886	50.0	38.0		"
	9. 887	51.0	39.0		"
	10. 888	50.0	40.0	16mm	"
	11. 889	50.0	39.0	16mm	"
	12. 890	49.0	39.0	16	"
*	<del>890</del> destroyed (can)				
	13. 892	49.0	38.0	16	"
	14. 893	51.0	37.0	16	"
	15. 894	49.0	37.0	16	"
	16. 895	50.0	38.0	16	"
	17. 896	49.0	40.0	17mm	"
	18. 897	50.0	40.0	16	"
	19. 898	50.0	39.0	16	"

\* 879 destroyed  
890



THESE EGGS HAD BEEN SEPARATED  
 BY DON LAST FRIDAY - REBURIED IN  
 BUCKET OF SAND - OPEN IN STATE PARKING -  
 ALL FOUND DEAD

7-10

TUES.

- 1 NFT (Near Full Term)
- 2 NFT
- 3 NO Development - yellow yolk.
- 4 NFT
- 5 NFT
- 6 NFT
- 7 NFT
- 8 NFT
- 9 NFT
- 10 NFT
- 11 NFT
- 12 NFT
- 13 NFT
- 14 NFT (moderate decomposition) } all the rest  
mild to no Decomp.
- 15 NFT
- 16 AFT (Approaching Full Term) } less developed than NFT
- 17 NFT
- 18 NFX
- 19 NFT
- 20 NFT
- 21 NFT
- 22 NFT
- 23 NFT
- 24 NFT
- 25 AFT
- 26 NFT
- 27 NFT
- 28 NFT
- 29 NFT
- 30 NFT
- 31 NFT
- 32 NFT
- 33 NFT
- 34 NFT

7-10-84  
TUES.

may very well be the only ones that yielded live hatchlings. Polaroid photos were taken of us holding the hatchlings. A PMRF newsletter was seen stating to call Don if eggs were found by personnel. We inspected the nesting site - nothing to see now. They estimate that ~106-150' of beach eroded away in the high south swell. Beach is wide light sand - no vegetation. Public access from east end, West end entrance you reportedly need a permit. Surfing site at Major's Bay just off point (N to our immediate west). Vehicle tracks on the beach - report that this is common. Photo taken of jeep passing by - also 2<sup>nd</sup> of Toni at nesting site. Close-up of representative hatchling being held by Don. Gave instructions on the release of hatchlings. Spoke with US Navy Commander (Brian Wallace?), Public Affairs Officer. Gathering info for an article in NAVY TIMES(?).

Proceeded to upland residential area of Waiimea (Kalaheo) to Dr. Arrington's house - wife - "Sid" Arrington. Saw 3 color prints of turtle nesting

7-10-84 at small beach below McBryde  
Sugar Mill - taken by:

DR. NATHAN WONG  
5361 KILAUEA AVE  
HONOLULU, HI 96816

Photos Group of people around average size nesting  
green turtle (Flash). Nesting turtle  
by campfire (available light).

~  
7 PM

Drove to this small sand cove -  
red dirt road seems freshly bulldozed -  
Don thought that some of the rock  
movement at the lower portion looked  
freshly moved around since he was here  
a few weeks ago with Dr. Kingston and his  
wife. The beach is yellowish sand  
bordered by rock cliffs. Estimated 100 m  
wide. Swell was moderate at the <sup>(~50 deep)</sup>  
time of our visit, but still came up  
quite a ways. Appears to have  
been washed over recently, or perhaps  
with each high tide? Don  
couldn't locate the nest site, but  
surely had been washed over. Nest  
site wasn't even apparent when Don  
was first there (?). Photos taken  
with 55mm & W.A.  
Also photos of gulch dump area  
with many cars.

Nick  
NAMED  
BY ME  
"SUICIDE"  
BAY -  
EGGS  
SITED HERE  
ARE SURE  
TO DIE

7-10-84  
Tues

7-70-84

Tuesday At point of land extending well offshore west of <sup>NEAR NUMICO FISHPOUND</sup> Lānai Kai, we saw a red buoy offshore - presumably marking offshore rock. East side of this point has a white-sand beach. We drove through Poipu and past Spouting Horn to Mr. Allerton's home.

JOHN G. ALLERTON

P.O. Box 519

KOLOA, HI-96756

Sand bar extends all the way across river mouth. - Don showed me where nesting attempts had occurred, - some on each side of bar. Don felt this was the most water he had seen in the river. Beach has a low profile.

Photos taken.

A short distance on the way out, we stopped at a cliff overlook. No turtles seen. Allerton reported to Don that a site here is called "TURTLE BAY".

Today's Garden Is. carried a full page on sea turtles - designed for children.

NOTE - Track width of basking (?) turtle seen by Don at Milohi - 39" W.

(every 5-years - survey)  
 7-10-84 For Nafali Coast Management Plan,  
 TUESDAY Don will make recommendations  
 about turtles - including terrestrial  
 basking survey in the winter (March).  
 → Helicopter Company ~~flies~~ fines  
 have been paid in the form of  
 flight time.

In the morning we say *ono au*  
 Sam Lee in the elevator of the State  
 Building.

DEPART 5:15 pm Mid-Pacific for Honolulu

DEPART FOR KAAHI - ALOHA AIR,  
 12/10/86 7:50 AM for nesting site survey  
 WED with Don Heacock, Grand inspection  
 of Warm-water discharge at  
 EleEle power plant.  
 Breakfast at Wendy's at 9am with Don.  
 Proceeded to KIPUKAI RANCH, through  
 Rice property (Robin Rice - "tick" student (lives here)).  
 Turn left at KIPU DRIVE out of LIHUE TO  
 THE WEST). - Property owner - Waterhouse.  
 JOHN T. WATERHOUSE Memorial at ridge -  
 2/26/06 - 1984. LINDY SUTHERLAND is  
 the <sup>cattle</sup> ranch manager. Resident caretakers  
 Karen & Brian KAIRIS, Box 747, LIHUE

ANS. Service  
 245-8914  
 or 15

TEL. "MOBILE"  
 #78

10 DECEMBER 86 - KAUAI KIPUKAI 79

WEDNESDAY

NEED MAP TO GLUE (ACCOS?)  
IN HERE.

Gate Combination 7470. From ranch house we walked along the coast to the east - steep basalt cliffs isolate entire area. Only other access is ocean. No cars & cattle seen. Wiliwili trees (endemic); cattle egrets. Photos of coastline for reference purposes. Four nest sites noted. Dug eastern-most first. Fine sand with good moisture content making shovel digging easy. Roots of beach morning glory and grass very extensive and deep. Reported heavy rain fall in recent months - must have grown since eggs laid. However, note body pit site bare of vegetation mostly. (see photos - CONTINUED ON PAGE 50 -

ID'd As green turtles based on egg diameter, head scute remains, and mummified hatchling in nest two (2).

— Beach morning glory prevalent vegetation  
NEST SITE - Photos by Karen & Don with shells.

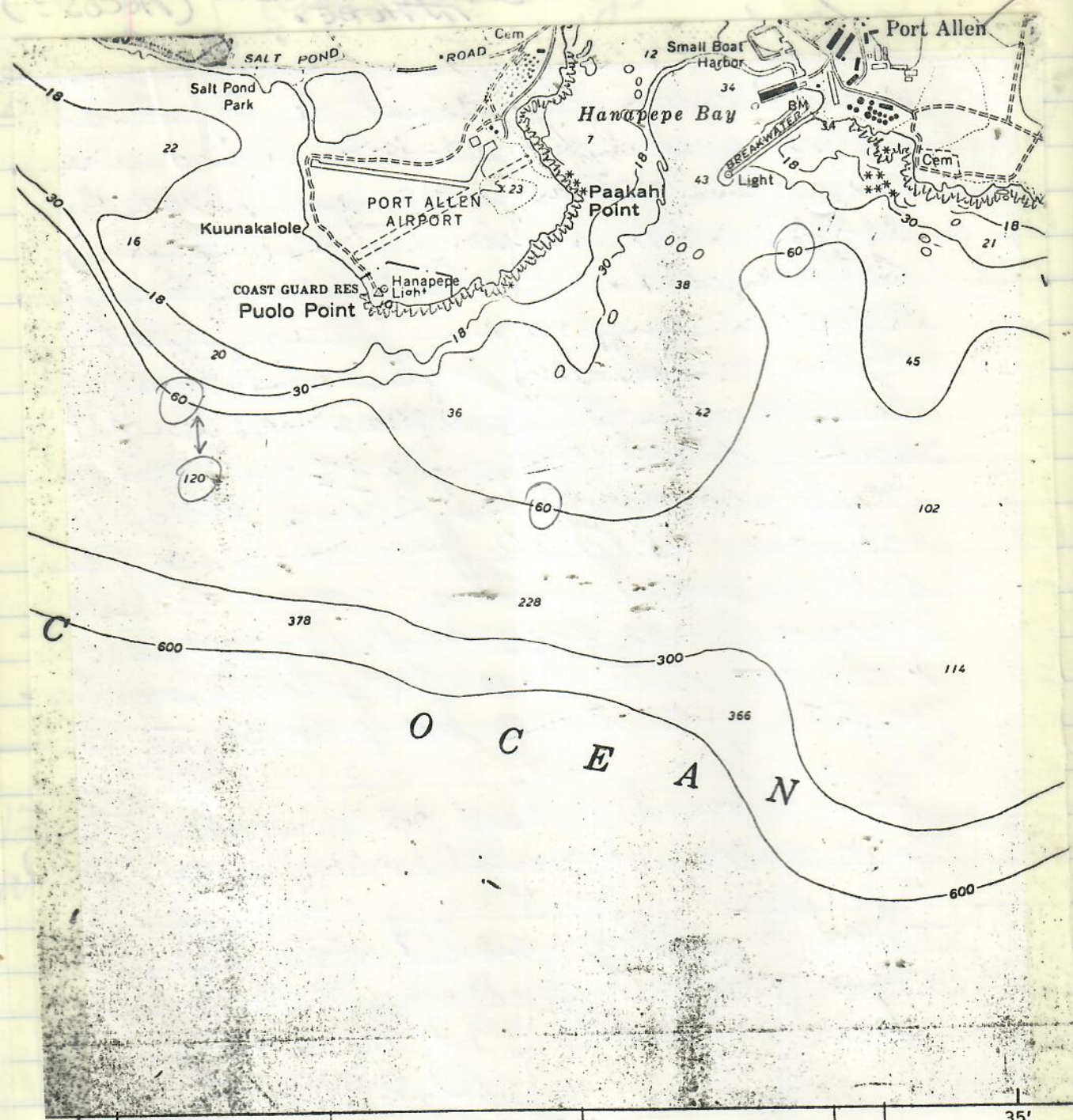
(1) Eastern - 92 hatched  
10 unhatched

TOTAL - (no apparent dev. - 4  
102 advanced dev - 5  
1/2 dev. 1

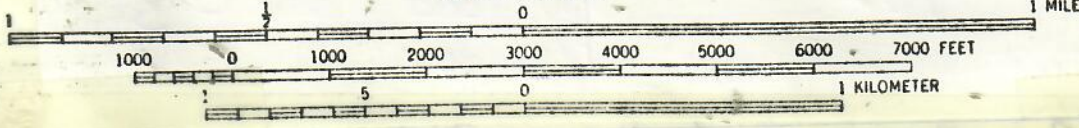
NEST SITE - photos prior TO DIGGING

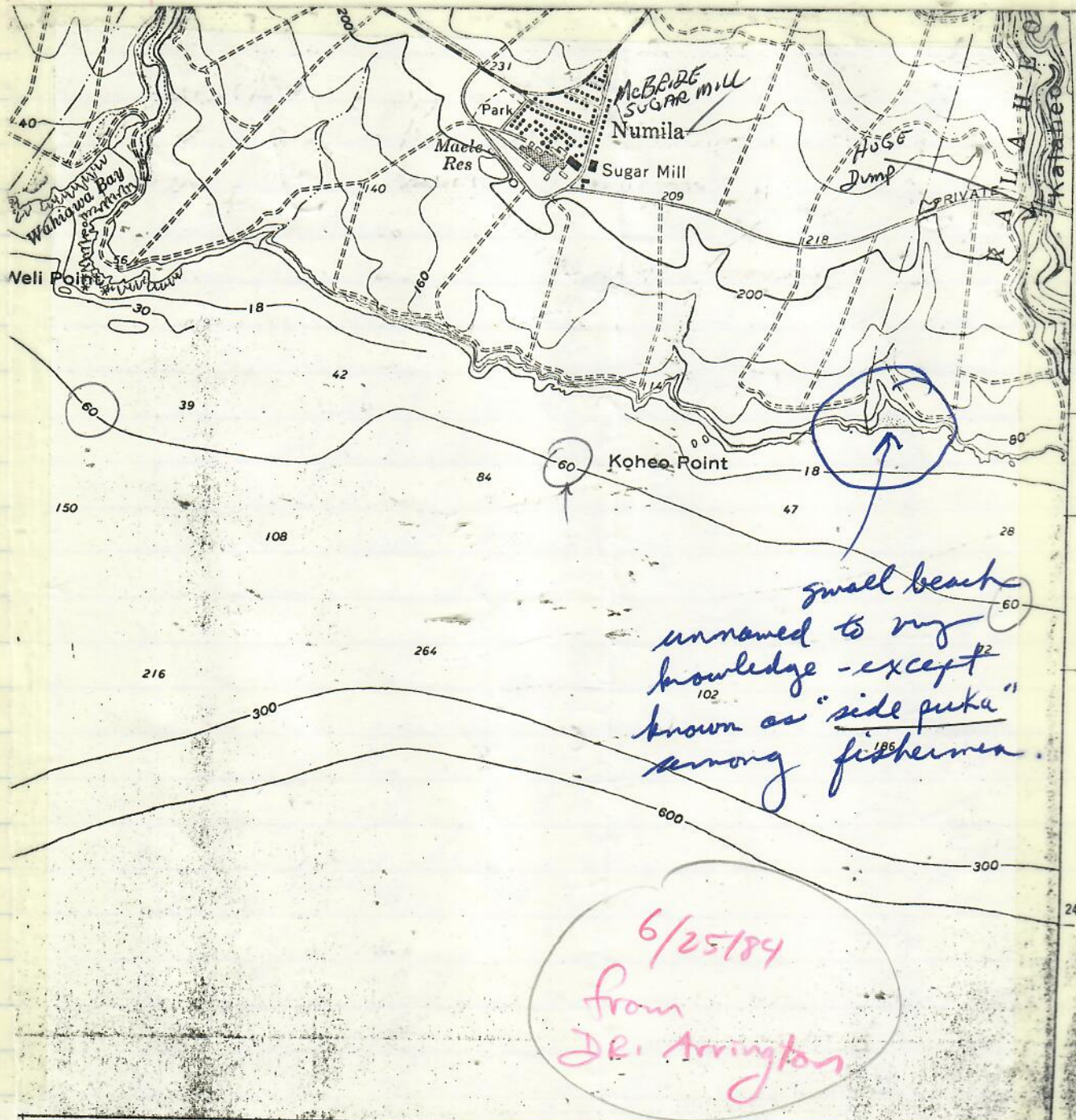
(2) 60 yrd west - 82 hatched  
DEPRESSION NOTED

3 no dev., 1 adv. dev., 1 hatched dead; 1 1/2 dev



SCALE 1:24 000





small beach  
unnamed to my  
knowledge - except  
known as "side puka"  
among fishermen.

6/25/84  
from  
Dr. Arrington

442000m.E.

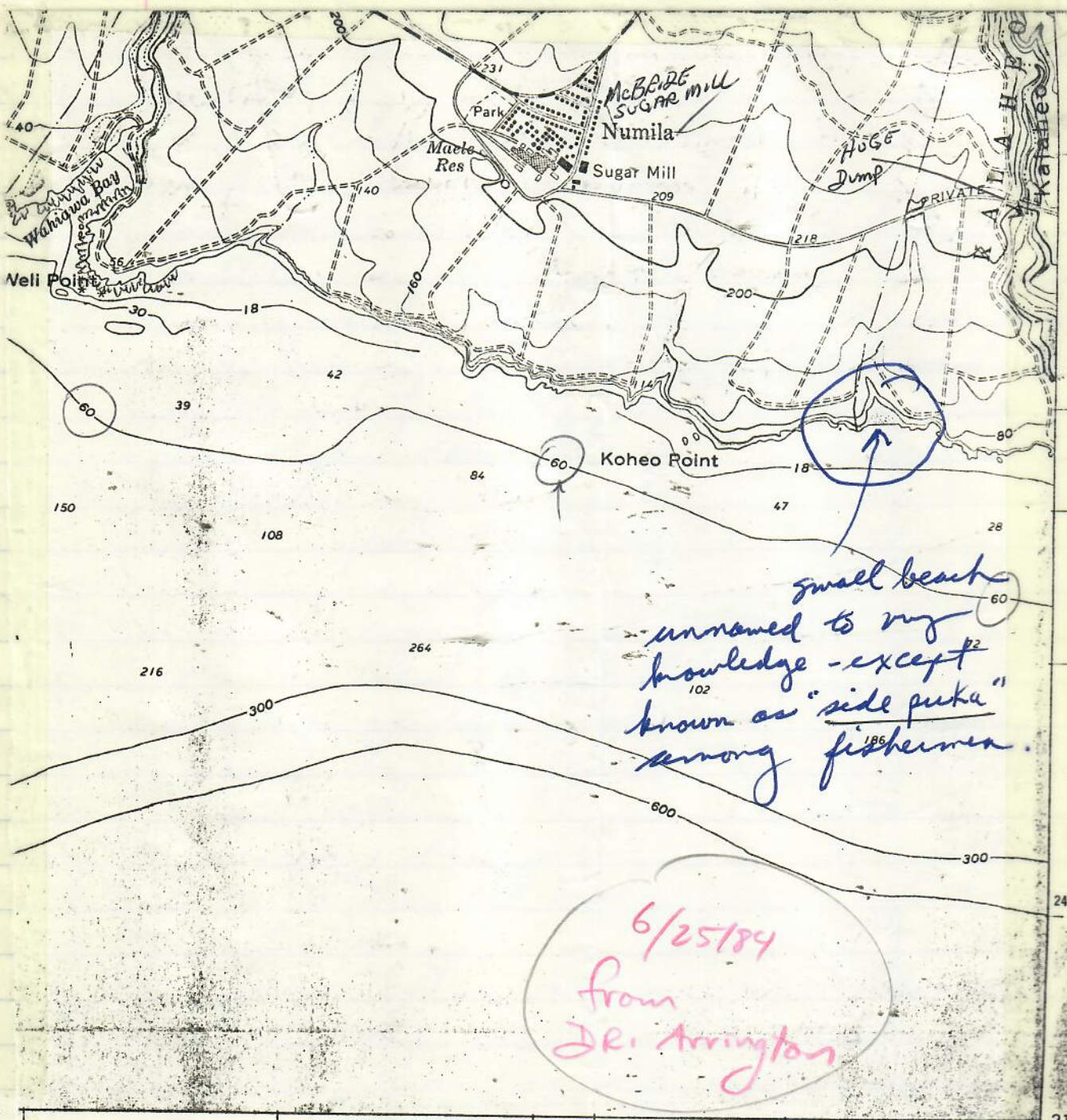
INTERIOR - GEOLOGICAL SURVEY WASHINGTON D.C. - 1965

21  
159°32'30"

ROAD CLASSIFICATION

- Medium-duty
- Light-duty
- Unimproved dirt





6/25/89  
 from  
 Dr. Arrington

442000m E

INTERIOR-GEOLOGICAL SURVEY WASHINGTON D C - 1965

21  
 159°32'30"

ROAD CLASSIFICATION

- Medium-duty ————
- Light-duty ————
- Unimproved dirt - - - - -

Drove by Honokawai - Pitake Cords is  
where numerous turtle sightings were  
made during early morning hours.  
Honokawai is a prominent community  
of off-hotel, etc.

APRIL 1985

SWORDBEL  
MALIKO

HAWAIIAN  
SWORDBEL

MALIKO

6 AM

7 AM

8 AM

9 AM

10 AM

11 AM

12 PM

1 PM

2 PM

3 PM

4 PM

5 PM

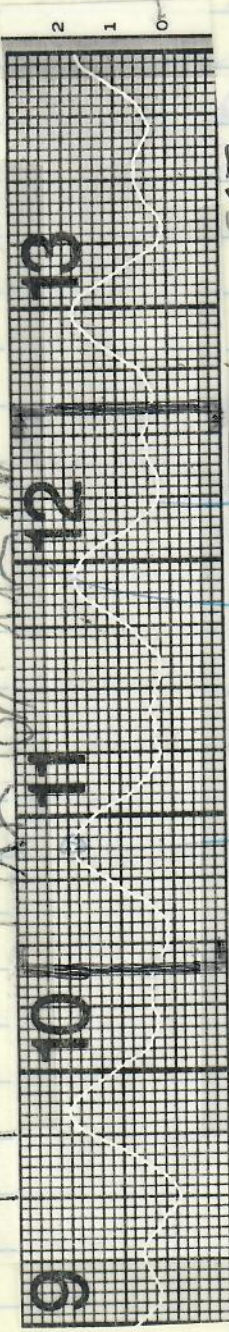
6 PM

7 PM

8 PM

9 PM

10 PM



SAT.

FRIDAY

THURS.

WEDNESDAY



For tide time at following places, add or subtract from Honolulu time.

PORTS	Hrs.	Mins.	Hrs.	Mins.	
HANALEI BAY, KAUAI	-1	40	KAUNAKAKAI, MOLOKAI	-0	09
HAWAIIAN BAY, KAUAI	-0	32	KAHULUI, MAUI	-1	48
FORT ALLEN, KAUAI	-0	32	KIHEI, MAALAEFA BAY, MAUI	-0	14
HALEIWA, OAHU	-1	36	HILO, HAWAII	-0	59
HAKUNA BAY, OAHU	-0	55	HONUAPO, HAWAII	-0	24
KANEHOHE BAY, OAHU	-1	35	MAHIKONA, HAWAII	-0	00
LOIE, OAHU	-1	48			
MAIANAF, OAHU	-0	14			

Mr. Arlen Henderson, President  
Maui Electric  
P.O. Box 398, Kahului 96732

tel. 871-8461  
Secretary "Thelma"

10 APRIL 85 WEDNESDAY

Depart FL 4 Midpacific Air at 10:15am with Robert Forsyth for ① preliminary appraisal of Maui Electric site ② Cahina dive shop interview ③ Turtle sightings, as listed in Maui dive guide. ④ PIKAKE CONDO - HONOKAWAI

Appraisal = ① coordination with power plant personnel ② check for continued presence of turtles ③ coordinate DOARE (JACOB MAUI) & DAE ④ determine what work is possible at electric plant site ⑤ where do these turtles feed? sleep?

Arrive - 11am; Rented a Thrift Chryslers gov. contract for #24. Drove to Electric plant - wind conditions are down - water not as turbid - some clearer "green" areas can be seen toward reef. Also a channel of sorts, in which water appears to flow out through reef. New stairs built since last year.

Drove to Honokowai Beach Park and walked along shore to Pipake Condo. Dense shoreline development - lots of cement walls and cement bays. Reef is limestone - are close to shore and are further out. Swell breaking and water very turbid. *Sargassum* covers much of reef along beach park, but starting at

4/10/85 <sup>APARTMENTS</sup> Piikahi there is notable growth of  
 wed Sterocladia with the Sargassum.  
 Intertidal and in nearest reef. Photos  
 taken of shoreline. We watched offshore  
 from 2:15pm - ~2:40. No turtles  
 seen.

Drove back to Lahaina and spoke with  
 Steve Young, dive boat captain for  
 Central Pacific Divers.

+ Blain Roberts at Lahaina Divers. He  
 feels turtles are becoming more plentiful  
 Singles regularly seen at their  
 various dive sites. Most are small.  
 However, many can be seen at the  
 Lanai location.

Stopped at "Lanai State Wayside"  
 At east end there was piles of  
Hypnea <sup>MUSCIFORMIS</sup> on the fine black sand beach.  
 Water 10-15 from shore seemed saturated  
 with it. Other material buried under deep  
 sand too.

Steve Young recommended: Hawaiian Watersports  
 Ed & Sue Robinson  
 879-3584

Swell dit in  
against rocks  
of breakwater.

Turtles  
"Stand"  
out when  
surfacing

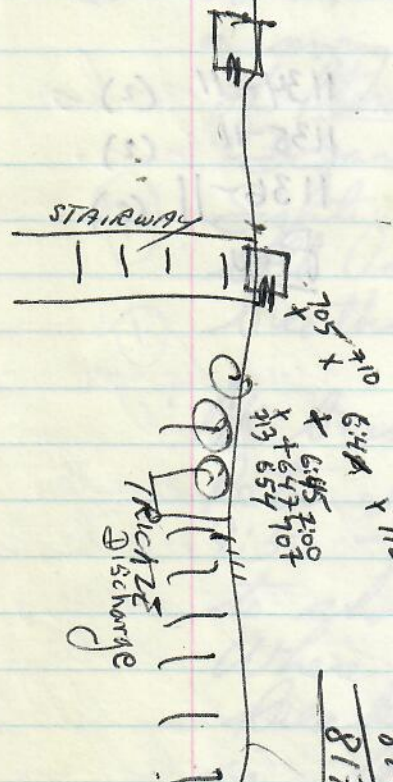
826 pm  
Mid Pacific

815 pm?  
2 packets,  
H2O  
Wednesday

705 - 50' out  
732 mid Pacific  
Hot Spot

740 - 11 (6) 714  
715  
716  
717 (2)

~~Hobbes  
Pt.~~



REICHTZ  
DischARGE

818 III (3)	801 IIII (4)	741 III (3)	716
819 IIII (4)	802 I	742 - I (2)	717 (2)
820 IIIIII (5)	803 I	743 - II (2)	718
821 IIIII (4)	804 IIII (6)	744 - III (3)	719 (2)
822 IIIIII (5)	805 - I (2)	745 IIII (3)	721 (2)
823 IIIII (4)	806 - II (2)	746 III (3)	722 (2)
824 IIIIII (5)	807 IIII (5)	747 II (4)	724 (3)
825 IIII (4)	808 I (2)	748 III (4)	725 (3)
826 IIII (5)	809 IIII (4)	749 I (4)	726 (1)
827 III (3)	810 I	750 - I (5)	727 (2)
828 III (3)	811 IIII (4)	751 III (3)	728 (2)
829 II (2)	812 IIII (4)	752 III (3)	729 (2)
830 IIIIII (5)	813 III (2)	753 II (2)	730 (2)
742 X	814 IIII (4)	754 IIII (6)	731 (2)
6:44 X 712	815 IIII (4)	755 IIII (3)	732 (2)
6:45 700	816 IIII (5)	756 IIIIII (9)	733 (2)
6:47 707	817 IIII (5)	757 III (3)	734 (2)
6:54 707	800 IIII (3)	758 III (3)	735 (2)
		759 IIII (5)	736 (2)
		800 IIII (3)	737 (2)
			738 (2)
			739 (2)
			740 (2)

4/10/85 AT ~ 8:30 pm when our counting stopped  
 WEDNESDAY 3 local males walked out (to along) the  
 turtle site - fought briefly and left. Returns  
 ~ 15 minutes later with large pole and 2  
 small spinner rods. Bucket of ice. <sup>BAIT-</sup> squid  
 Sinkers on bottom of line, single hook  
 Still fishing - 3 poles - still rough - choppy <sub>pm</sub> H<sub>2</sub>S small

1105 - 111 (3)	1119 - 1	
1106 - 1	1120 - 111 (4)	1134 - 11 (2)
1107 - 1111 (5)	1121 - 1	1135 - 11 (2)
1108 - 1111 (4)	1122 - 111 (4)	1136 - 11 (2)
1109 -	1123 - 1	<u>PAV</u>
1110 - 11 (2)	1124 - 111 (3)	
1111 - 111 (5)	1125 - 111 (5)	
1112 - 111 (3)	1126 - 111 (3)	
1113 - 1111 (4)	1127 - 111 (3)	
1114 - 1111 (4)	1128 - 1 <sup>filling</sup> <sub>up poles</sub>	
1115 - 1	1129 - 1	
1116 - 11 (2)	1130 - 111 (3)	
1117 - 11 (2)	1131 - 1	
1118 - 111 (3)	1132 - 1	
	1133 - 111 (4)	

Volume of discharge vs. time of day?  
 temp. of discharge related to time of day?

Dinner at Jack in the Box  
 Bed ~ midnight

- Small knit bag  
- slate  
need - small screw - pry bar.

HONOKOWAI  
20° 57' N, 156° 42' W

91

11 APRIL 85 up at 5:30am - drove to Pikake site -  
Thursday Started observing at 6:30am. Twilight  
apparent in Kalyllini at 5:45. Sat on stone  
wall at Condo just east of Pikake.  
Ray of rising sun prominent by 7am.

① - Furtive sightings made beyond outside  
break at 7:14 and 7:21 (2 sites - possibly  
a moving turtle). Tide low, so much  
of Pterocladia is exposed.

① Departed at 7:45am  
Sighting at 7:34 & 7:37, right side and  
both at the same location - 2 quick  
breaths each.

① Ate breakfast at the Pines Inn.

Returned to snorkel off Pikake at  
9:30 - 10:45am. Found Pterocladia close  
to shore, both sides of small channel "pass."  
Where white water of waves are  
breaking it is <sup>1.2-1.5m</sup> 4-5 feet - here there  
is plots of algae on hard bottom  
with light sand covering. U. reticulata  
is common, apparently often entangled in  
and growing from Pterocladia and others.  
Ptero has greenish tips, others (Ptero)  
are dark - almost black. Pieces  
photographed on shore. Acanthopora (small seen),  
Codium (large wide stalks); five Gelidium;  
A crunchy red; Ulva foeniculata; one confirmed  
epiphytic on Pterocladia; Red (crustose?)



11 April 85 Sat. algal "bar" there is lots of live  
 Thurs. coral - Pocillopora, Pontes encrusting.  
 Same spur and groove, but not very  
 elevated; Beyond live coral there is  
 barren sand bottom 20-30' +  
 extending out. Possibly there is  
 another limestone plate out deeper.

Bryopsis right near shore on exposed rocks.  
 Also another Ulva - wide in ribbons.

- species?

Lunch at Jacquot.

MAUI Electric Plant.

2-3 fm - Swam around discharge  
 and along slope embayment to  
 sandy area to the east. Surface water  
 is much warmer than deeper water.  
 Clear site where most turtles are seen  
 is nearly uniform warm to the bottom.  
 Shallower than I originally estimated  
 - 5' only. Detected algal collected in  
 water column - including fresh looking  
 pieces of Codium. Appears to be  
 smooth bottom in surrounding turbid  
 areas. Suitable to getting a net.  
 Hard bottom. Anchoring would be  
 a problem.

3-4 small sharks brownish, with  
 black tip dorsal, schooling each other  
 around offshore.

4-11-85 Arrive at Power plant stairs 6:25 pm  
 Thurs. Fisherman casting from rocks immediately  
 below. Sun already set below <sup>W. MOUNTAINS</sup> mountains.

Artificially high population built up due to  
 discharge?

Higher respiration due to elevated temp?  
 "Oceanic" vessel in harbor,  
 Harbor Point.

94  
MAUI

4/11

bathroom  
hose  
gate  
park

MANU/C/TAPE CLEANING Station?  
MANU present  
clock  
dark gloves

(Fbs smell)  
light wind (from shore) & swell down. Flood lights  
at Matsen on  
TONIGHT?  
Car lights bright.

6:58 1 (small TO the right)  
659 1 save? (light cane on)  
705 - 1 same?

709 1  
710 1  
715 - 11(2)  
717 - 1  
719 - 11(2)  
720 - 1  
721 - 1  
722 - 11(2)  
723 - \*  
724 - 11(2)  
726 - 11(2)  
727 - 1  
728 - 11(2)  
729 - 1  
730 - 1  
731 - 11(2)  
732 - 111(3)  
734 - 1  
735 - 1  
736 - 11(3)  
739 - 11(2)  
741 - 11(2)  
742 - 1  
743 - 1  
744 - 11(2)  
747 - 1  
748 - 1  
749 - 1  
750 - 11(2)  
752 - 1  
753 - 1  
754 - 1  
756 - 1  
758 - 1  
759 - 1  
800 - 1  
801 - 111(3)  
803 - 1  
804 - 1

805 - 1  
806 - 1  
807 - 1  
808 → 3' Shank by stairs outflow  
810 - 11(2)  
812 - 11(2)  
814 - 11(2)  
815 - 11(2)  
816 - 1  
819 - 1  
820 - 1  
821 - 1  
822 - 1  
823 - 1  
824 - 111(3)  
826 - 11(2)  
828 - 1  
829 - 1  
830 - 1111(4)  
831 - 11(2)

DINNER

932 - 1  
933 - 1111(5)  
934 - 111(3)  
935 - 1111(4)  
936 - 1111(4)  
937 - 1  
938 - 1111(5)  
939 11(2)  
940 - 1  
941 - 111(4)  
942 - 1  
943 - 111(3)  
944 - 11(2)  
945 - 1  
946 - 11(2)

Not seen  
Small  
Tortoise

947 - 111(3)  
948 - 111(3)  
949 - 1111(4)  
950 - 111(3)  
951 - 1  
952 - 11(2)  
953 - 11111(6)  
954 - 11(2)  
955 - 1111(4)  
956 - 1  
957 - 111(5)  
958 - 1  
959 - 111(3)  
1001 - 11(2)  
1002 - 1111(4)  
1004 - 1111(4)  
1005 - 1

Faint twilight  
523 - 0  
524 - 0  
605 - 0  
FISHMEN TO THE RIGHT  
4-12-85  
LESS DISCHARGE PRESENT

4/12 FRIDAY  
6:15 AM Depart  
after looking for foraging  
turtles. None seen.  
NO sun, NO wind -  
calm seas. NO fishermen  
~ 10 AM  
Center, most easterly discharge  
31°C.  
one by steps 30°C+

4-12  
FRIDAY

8 AM

4-12  
FRIDAY 5:30am Noted floodlights to the left in  
Matson terminal area road off. - 50m (road)  
Calm seas - light wind - same as  
last night.

Bright twilight by 5:50am.

Discharge has similarities to a spring  
discharge. Salinity? (see report).

\* Bring N & P test kit.

Staring light out 6:03am.

Ate breakfast at MacDonalds

20°49'N, 156°38'W.

8AM Arrived at MALIKO Bay (just past  
10 mile mark). Guidebook says  
"lots of turtles" on right side. We  
walked out to the point for preliminary survey.  
Pterocladia seen growing along edges,  
boulders, on each side of bay (cut by  
river). Boat ramp present - 2 parked  
cars with boat trailers + one inflatable just  
launched. Almost glassy calm offshore -  
slight surf at rocky point of the right. Only  
a small narrow flow from stream.

\*

Lots of Pterocladia forage seems available  
at site like this. Today doesn't appear to  
be a limiting factor. Perhaps sleeping habitat,  
recruitment, or mortality are.

8:30-9:30pm - Snorkled Malika - walked out  
on right side, entered and swam out  
to rocks of shore. River channel

4-12-85 is deep cut in the center, and seaward.  
 FRIDAY Two or more terraces. Lots of coral  
 cover and relief (holes, pinacles,  
 shelves) for turtles to sleep in.  
 Carefully searched from the surface  
 and by diving down, but none seen.  
 Very good visibility. One or more  
 sites seen, where marks in the  
 sand may have been from turtles.  
 Swam across the bay and  
 explored intertidal rocks- ledges  
 with rich growths of Pterocladia.  
 Motel presumably older stays at slight  
 depth - covered with white (coralline alga)  
 growth. Surface Pterocladia is free  
 of this epiphytic material. Grogged  
 more often?? Very clear water. This  
 would be an excellent site to  
 photograph the alga under water.

COLD

Russell  
X

Returned to Motel - 11 am. Took  
 discharge temperatures at Power Plant.

4/12 Left Kahului on Mid-Pacific at ~ 1:25 pm  
 Arrived Honolulu ~ 2 pm - Picked  
 up by Alan.

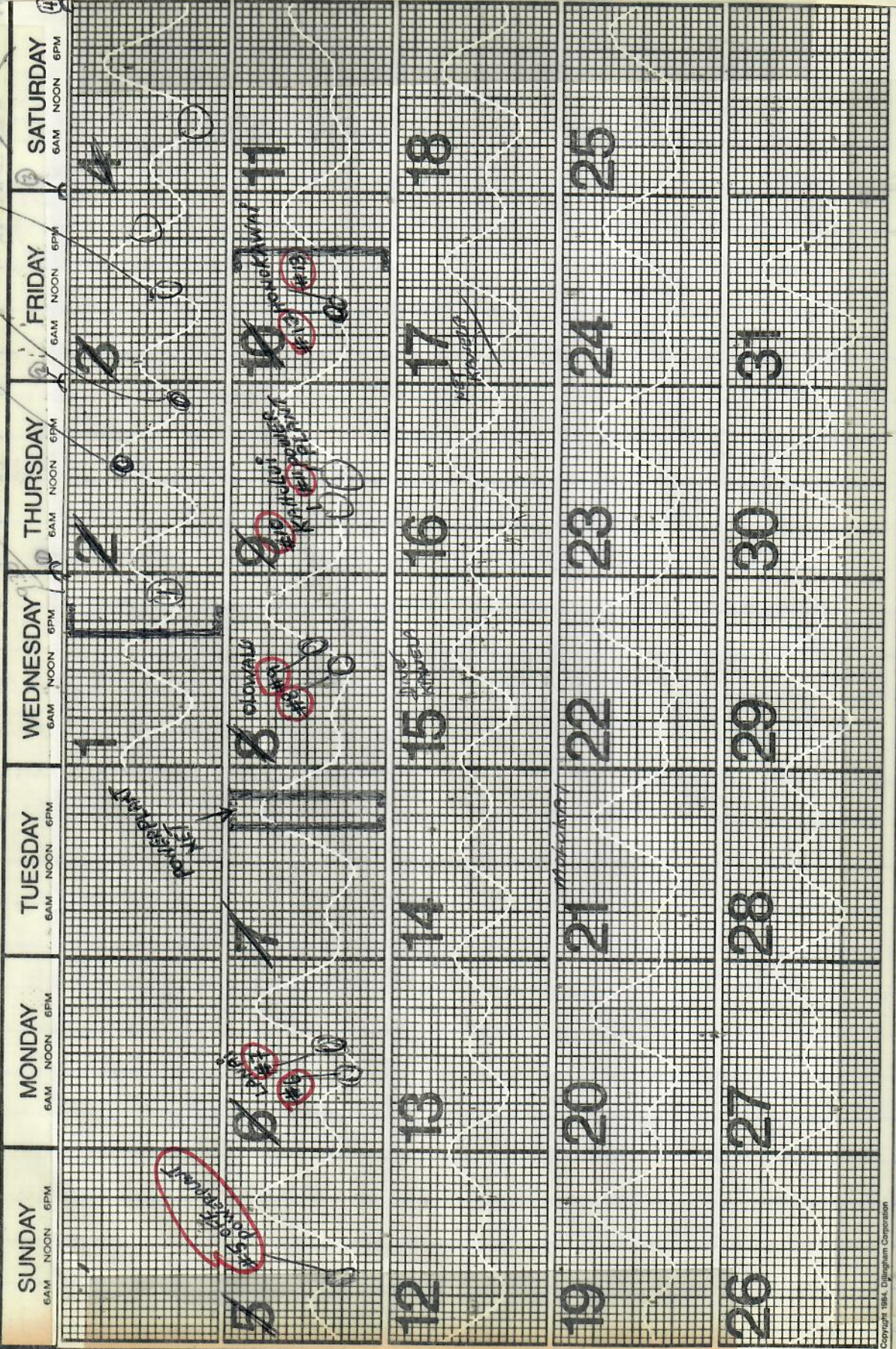
4/18 - telephoned - Managers 4-19-85:  
 Pitake Apt. Tel. 669-6086 He will send 1985 data "Saw 3-some that looked like copulations"  
 (BURGESS) like copulations  
 2/84 observer - Bud Heacox  
 BACK 2-3/85  
 277 San MIGUEL Way  
 Sacramento, CA 95819  
 916-457-8845  
 Pitake MANAGER:  
 MR. JAN TERLUIN  
 3701 Lower Honouliuli Rd  
 Cabana, HI 96761

Dive Guide to MAUI - Chuck & GINA THORNE  
 2387 S. KITHEI Rd. - B205  
 Tel. 879-7068 KITHEI, MAUI, HI 96753  
 Talked to Gina on 4/17/85

Hank McDermott - Assistant Manager, Capt. Nemos  
 661-5555  
 "Al" - fellow with earwig who handles our  
 tank rentals. - Runs power boat "Capt. NEMO"

MAY 1985

LANAI  
SUBMIRAKE #1  
SUBMIRAKE #2  
SUBMIRAKE #3  
SUBMIRAKE #4  
SUBMIRAKE #5  
SUBMIRAKE #6  
SUBMIRAKE #7  
SUBMIRAKE #8  
SUBMIRAKE #9  
SUBMIRAKE #10  
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SUBMIRAKE #44  
SUBMIRAKE #45  
SUBMIRAKE #46  
SUBMIRAKE #47  
SUBMIRAKE #48  
SUBMIRAKE #49  
SUBMIRAKE #50



APPROX. 6 AM SUNRISE  
7 PM SUNSET

MAUI

99

For tide time at following places, add or subtract from Honolulu time.

PORTS	Hrs.	Mins.	PORTS	Hrs.	Mins.
HANAIEI BAY, KAUAI	-1	40	KAUNAKAKAI, MOLOKAI	-0	09
NAWILIWILI BAY, KAUAI	-0	32	KAHULUI, MAUI	-1	48
PORT ALLEN, KAUAI	-0	32	KIHEI, MAALAE BAY, MAUI	-0	14
HALEIWA, OAHU	-1	36			
HANAUMA BAY, OAHU	-0	55			
KANEIHEE BAY, OAHU	-1	35	HILO, HAWAII	-0	59
LAIE, OAHU	-1	48	HONUAPO, HAWAII	-0	24
WAIANA, OAHU	-0	16	MAHUKONA, HAWAII	-0	24
WAIMANALO, OAHU	-1	15	KEALAKEKUA BAY, HAWAII	-0	16

MOON PHASES



FORECAST  
MAUI MARINE - 8773477  
WEATHER - 8775111

6:01 SUNRISE  
6:57 pm Sunset (23 MINUTE TWILIGHT)

1 May 85 4:10 pm depart for Maui, Robert, Kaim  
WEDNESDAY & I. 10 pieces of luggage (but only charged  
for 2 excess). Bill brought us to the  
airport in his truck.

At Kahului Airport we picked up the  
red car of Gene Withings and transported  
all gear to Maui Palms (#36 night).

Visited powerplant site at 6:25 pm.  
Saw 1-2 turtles in discharge water -  
2 others off to the left - Arriving or  
waving out?

Ate at Chinese Restaurant Ming Yuen.  
\$10.50 + .50 coffee.

Visited powerplant again at 9:30 pm  
(low tide was ~ 6:30 pm) - 10 MINUTES OF  
COUNTS AS FOLLOWS: (NO. HEADS SEEN SURFACING)

9:18 pm	13	9:24	15
19	11	25	13
20	12	26	14
21	15	27	18
22	14	28	16
23	15		



Parking attendant at Airport - "Lehua" 10<sup>am</sup> - 6<sup>pm</sup>

Zodiac at: KAMOA VIEW CONDO <sup>tel 879-0051</sup>  
2124 AUWILI PLACE  
#313  
KIHEI, MAUI

Laura Johnson <sup>tel. 661-5555</sup>  
Capt. Nemos  
700 Front St.  
Lahaina 96761

Ralph & Dorothy Kihiki Beach Shores #5 (cross from  
Menehuna Motel) <sup>879-2744 or 879-1339</sup>  
<sub>1 shores 760, Kihiki</sub>

William office in Honolulu - 546-5670

Laura Johnson 879-0493 home phone

Mr. Carl Helm - Maui Electric  
871-8461

3 MAY 85 FRIDAY

JERI RELAYED

Message - 5-3-85 Dead turtle 16-18"

Peter Connolly - Lanai

565-6242

Sunday  
Found 4/28/85  
AT "WAIOPAI" LANAI

ALAN STARR'S

Bob LeGoff (been there a few months)  
caretaker of Starr's  
property - found about the same time as  
Peters - very same location.  
Has the shell drying in the yard.

871-9181

4 MAY

Peter called Linda saying that LeGoff found a  
sick turtle that "wouldn't swim". He has it  
his house.

(TERRY KAHALUANO - PART-TIME  
CARETAKER)

5 MAY 85

called Peter - Turtle died - Peter picked it up and has it in freezer with the one found the other day. This one is fresh.

2 MAY 85 Up at 6am - readied gear for scuba -  
 Thurs. Ate at McDonalds - \$2.50. Drove to  
 Powerplant at - tanks no turtles seen.  
 Drove to Kikei to Lardo where Zodiac  
 stored. Spent 1 1/2 hours siphoning gas,  
 fixing up boat, repairing trailer lights.  
 Bulb - \$2.35 Union 76! Trailer boat  
 to Lahaina. Picked up 2 bottles at  
 Capt. News - with P.O. Bought mouth piece  
 for 2nd stage - \$2.35. Launched boat at  
 Mala wharf - a good ramp. Wash water  
 present but no bath rooms. Motored  
 to off Pikake Lardo. NE wind line started  
 when we rounded point of Sheraton Hotel -  
 black rock. Anchored slightly further  
 out than the most oceanward distance  
 that Robert and I snorkeled during last  
 trip. One bottle found to only have  
 900 lbs air. Robert and I dove  
 1:40 to ~ 2pm, 23 minutes, "PIGGY BACK"  
 25' depth - smooth sand bottom, FOR AQUILAE  
 but lots of large outcrops of MOUNDS  
 point coral. Lots of damselfish  
 present on one. Limited visibility. We  
 followed edge of mounds around looking  
 for turtles sleeping at the border. None  
 seen. Within the mounds, there were  
 depressions that seemed to be  
 from turtles sleeping, but uncertain.  
 Mounds looked very much like at Harauma.

HONOLOUA, MAUI  
20° 57' N, 156° 42' W

SCUBA #1

2 MAY 85  
Thurs.

Returned to Mala, washed gear and picked up 6 bottles at Nevos. Met Hank McDermott, Assist. Manager.

"Turtle Heaven" reported to be off "Summer house" - Star's property. All along this area are turtles. Ridge with red dirt road coming down is a marker. The other day someone took a photo with 8 turtles in it. Some south surf up road.

Bought misc. food at supermarket - \$9.92.

Packed Zodiac at airport, and returned to Maui Palms - 5 pm.

Dinner at Polli's \$10.00.

Returned to motel where I suited up.

Went to powerplant - light winds.

- |             |         |         |
|-------------|---------|---------|
| ① 9:37 - 26 | ⑥ 43-12 | ⑩ 48-20 |
| ② 38 - 22   | ⑦ 44-19 |         |
| ③ 39 - 27   | ⑧ 45-19 |         |
| ④ 40 - 28   | ⑨ 46-29 |         |
| ⑤ 41 - 22   | ⑩ 47-19 |         |

Saw small shark moving through <sup>illuminated</sup> lit area and turtles.

I entered clear area - 10 pm - felt I counted 28 turtles. No fight seen - little energy being expended - turtles seemed very rested. Several turtles seem motionless on the bottom - like big

3 MAY  
Friday30° 49' N  
156° 38' W

smooth stones! Nearly all turtles looked very large. Grabbed one "fore and aft." Got out of the water after ~5 minutes. Alan & Robert said that 2 "flew out of the water" - splashing. When I got out, no turtles were seen left.

Counts - 10:06 pm - 0      10:10 - 1      10:14 - 0  
                 10:07 - 0                      10:11 - 0  
                 10:08 - 1                      10:12 - 0  
                 10:09 - 1                      10:13 -

Did clear area of hot water dissipate when I swam in and turtles swam out? or did this occur from wind & currents changes

Wahuku "TASTY CRUST" for breakfast. - \$3.75  
3 MAY 85 8:15 am telephoned Prob Man  
Friday picked up zodiac at airport and  
drove to Maliko Bay - gusty winds blowing  
lots of white caps, but little ocean swell  
apparent. <sup>10am</sup> Launched at ramp - cement in  
good shape - we boat out. Wind whistles  
down <sup>GOLCH</sup> canyon creating ripples across  
water. Anchored on the inside lee  
of rock outcrops on the right. Down <sup>Robert I</sup>  
at 10:20 am using 80 cu. in tanks.  
Swam out along edge 40-50' - lots  
of mushroom type of coral & 3  
dense cover - saw out in center of  
channel. Continued on out and

20° 49' N  
156° 38' W

3 MAY 85 FRIDAY saw a large "Pop-eye" anchor on the sand bottom to the left perhaps in 70' of water. A short time after passing this site, 2 turtles ~60 cm dropped down from in front and above us. Glided smoothly along with no fight response, but noted away from us. Shortly thereafter came to sheer black rock cliff edge - (same as earlier, but no coral cover?). Outcrop veers to the right, which we followed, noting a 1-relay coral anchor with a floating rope trailing 20' up off it. noted blind channels <sup>crevices</sup> running inshore, where in one I saw a ~75 cm male move slowly up, presumably from within boulders. Robert saw a 4th turtle ~60 cm near deeper detached outcrop of rock rising to only ~15'. Major outcrop we have been following rises to perhaps 15' of the surface, with shallower projections that break into wave action. All sand bottom around base of rock outcrop. Lots of file fish seen. Much earlier in the day, we saw an undercut with sand bottom - marks of turtle? 45 minutes - 65(70)'

SCUBA #2

Drove back to Burger King for coffee and to #75

3 MAY  
FRIDAY

and  
feed?

3 MAY 85  
FRIDAY

write up notes. Planned to <sup>Scuba</sup> dive off power plant, but white caps abundant - brisk trades. Decided not to, but rather get up early to do it. Washed gear, parked boat at airport. ~ 3:20 pm, (watched discharge site at power plant for about 10 minutes - nothing seen.

QUESTION - Smaller turtles get lower priority on use of prime warming site? Forced to stay on the fringe? Where warm water does not extend all the way to the bottom.

and feed? "Race" for the site? Turtles "lay-off" in the turbid region until its dark enough for them to feel safe to venture to warming pool close to shore?

NOTES: 2 types of offshore habitat:

- 1.) Pronounced reef where waves break much of the time.
- 2.) No break offshore, but rather sloping bottom that drops down ending in smooth sand or rubble area dropping continually to very deep water. (#1) may also have this seaward of the wave break.

used to be alot at Waieae - "cove in", not now.

Boke 100 - Kihei - Torgans take turtles with nets.

Cobsters w/ eggs off breakwater, Kahului. Ed wet 50 yds. off point

SEC. GUARD ARRIVED

100' yellow rope; (see page 107)

6:40 pm arrive - heavy clouds over w. Maui Mountains - official sunset at 7 pm

6:41; 6:52; <sup>TO THE LEFT</sup> off discharge Block #1 (20' off) - 1T

6:43 - 2T in "pool"

6:47 - between stairs & point - 1T - <sup>mod</sup> eye out - moving out?

6:50 1T - pool

6:53 - straight out from Block #2

6:56 - to the left (between shore & Pt)

6:59 - to the left

7:01 - to the left

7:02 - to the left

7:09 'Pool + 2 to the left

7:10 - Light out <sup>LAMP post</sup>

AZAN 7 pm TO THE right - rear break

6 pm STOP departure

CONSECUTIVE START

	Left	Pod	Right	(on shore and chop)
7:17 -	6	1	0	7:33 - 4
↓	2	1	0	34 - 3
	1	4	0	35 - 3
	2	1	0	36 - 7
	2	3	0	37 - 5
	1	0	0	38 - 4
	3	1	0	39 - 6
	0	3	0	40 - 3
	1	2	0	~7:40 pm
	0	3	0	Keith Keau - DO CARE
	0	0	0	ARRIVED - Counts discont
	2	2		(Request more info FROM HIS FATHER)
	2	2		
	1	1		
	3	3		
	1	1		

lay OFF TO THE left (on feed?)

HARD TO SEE

SO can't see discontinued

Yellows in Seams in head very visible - + glistening w/ in on the back of head.

3 M FRIDA

3 MAY 85 \* Botelho felt turtles "came from the left". He only  
 FRIDAY KNOWS OF ONE REPORT INSIDE HARBOR - A LARGE BARNACLE  
 ENCRUSTED ONE SEEN REGULARLY.

100' yellow rope - Sec. Guard Botelho saw 3 guys  
 with this by harbor - they left when  
 seeing him - he kept rope - nothing on either end.  
 Keith thought it was for hooking turtles.  
 Keith's father, "pure Hawaiian" told of seeing  
 turtles "stacked-up", on top of one another, in  
 harbor area, [by warm discharge?]. He  
 mentioned harbor extension (point we  
 see to the left). What year built?

Last week a hawksbill was  
 caught in a net at Baldwin Park.  
 They were involved and it was released.

Keith also mentioned that in the 1930s-40s  
 turtles were shot from shore at Kampo -  
 apparently a noted site for turtles. They  
 were picked up when they washed ashore  
 (His father did this?).

DATA Summary for Power Plant observations THIS EVENING:

"Twilight" lasted much longer than 23 minutes - possibly 45'.

Very few sightings before latter part of twilight.  
 Sightings increased > 7:15pm, especially to the left and center (pool).  
 NOTHING MORE SEEN TO THE RIGHT.

No sharks seen.

TACO HUT DINNER: \$4.75



COUNTS AFTER DINNER

(Friday night power down?)

Plume sweeping to the left in front of Block #2 - <sup>LARGER</sup> - Than usual -  
LARGEST I'VE SEEN YET -HEAD COUNTS  
9:10 pm 6

9:11 8

9:12 5

9:13 9

9:14 7

9:15 2

9:16 10

9:17 4

9:18 5

9:19 4

~ 5 photos with flash standing on Block #2 - yellow mode -  
3.5 - 5.4 f stop. Some turtles seemed to move  
into turbid areas, but no fight response.  
Heads still regularly coming up.

4 MAY 1985  
SATURDAY

HALEPALOEA LANDING, 4

109

KEDMUKU, LANAI

20°51'N, 156°50'W

UP at 4:45 am - breakfast at Tasty Cunit #400  
Picked up boat at airport - checked powerplant  
water condition - dark clouds toward Paia.  
Wind already blowing. Decided to go to Lanai.  
Drove to Paia - launched and left at

BOAT GAS...  
Purchased on  
charge CARD.

SCUBA  
#3

7:30 am - arrived off Stall's <sup>LANAI</sup> property at 8 am.  
Two white markers for their channel. Palm  
trees have grown quite high. Anchored just north  
for scuba. Entered ~ 8:30 am. Extensive  
coverage of *Portia compressa* intermixed with  
others. Some sand patches in between.  
Anchor at ~ 25', we swam seaward  
~ 25 meters gradual slope to 60+ where  
coral ends and sand/silt smooth bottom  
starts. We followed this edge along, going  
with the current at a rapid-moderate rate.  
At a few places we swam toward shore  
following sand channels. Robert saw  
one turtle off in the distance above a  
coral mound. I couldn't see it.

1  
Turtle  
Seen  
UN

Upon surfacing, we found ourselves nearly  
in front of Stall's property. Blew whistle  
and Alan motored to pick us up.

UP 9:30 am - 52 minutes - 60' Halepaloa  
Landing

3 seen  
surface

Motored to the north and anchored just  
before start of reef flat - bare rock at  
low tide. People walking out on it. <sup>FOR TANK</sup>  
Snorkled for ~ 45 minutes. 2-3 small <sup>Turtles</sup> seen

4 MAY 85  
SATURDAY

seen prior to anchoring. 5 seen in the water -  
I saw one drifting back & forth with a  
school of Manini. Alan caught one.  
5 seen  
snorkel  
below. Another he got his hands on,  
but it got away. This one was resting on top  
of Pointes.

PHOTO IN ZODIAC

Alan -

Found 4/5 under ledge - in a sand pocket  
no larger than suitcase, up and under. - 20' deep.

7259 RFL

S - 52.1 x - 41.2

notch - 51.9

7260 LFL

C - 56.0 x 49.0

1<sup>st</sup>  
Turtle - Keomuku  
hand-  
skin

PL - 41.1

HEAD - 7.8

TAIL - 10.0

RFF - 8.7

Sample No. 7260 Lanai ✓  
7259Amansia glomerataJania capillaceaAcanthophora spiciferaCeramium sp.

99%

Trace

Trace

Trace

A few

Skin barns; and red alga on skin.

Stomach flushed - particles preserved - appear  
to be Amansia. This was seen,  
but covered with silt. Blown off  
when eaten?

SCUBA  
#4

For Dive ~~with~~ two Robert and I were dropped  
off approx. off ~~large anchor~~ <sup>present</sup> on reef flat.  
Stem & ribs -  
remains of ship wreck.

5 MA

Sonda

4 MAY 85

Asparagopsis taxiformis seen  
frequently during Lanai dives <sup>on</sup> scuba.

111

Started at 12 noon <sup>duration</sup> - 45 min. - MAX. depth 50'.  
Current still strong - moved us right along.  
→ No turtles seen - but lots of fish & coral.  
Followed "drop" <sup>39'</sup> for much of the way, but also swam up 2 sand channels into 20' depth.  
Returned across channel to Maopla wharf arriving at 2:45 pm. Trained back to Kahului airport - coffee at JLTB <sup>DK</sup> to write up notes (.60). Mass at 6 pm at Christ the King Church.

At 9:40 am visited Power plant. one vehicle present - GMC Lic. MHI 871.  
Two fishers on block #2 casting out with med. rods. Line (+bait?) - light weight. No turtles in clear discharge water. Watched for ~20 minutes. one large turtle seen surfacing in peripheral turbid area. one fisher pointed to it and commented. Casting occurred right over (and in) clear area. walked to the right down path and saw a large turtle close to rocks in the "up-wind" up-hot water area. Surface and dove slowly, causing me to believe it ~~was~~ was feeding.

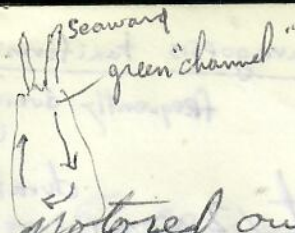
7:30 pm Dinner at Tasty Crust - \$6.00

5 MAY UP 5:15 am. \$2.25 TASTY CRUST  
Sunday Wind very light, so I decided to launch at

112

SUNDAY

5 MAY 85

DIVE  
OFF  
POWER  
PLANTSUNDAY  
5 MAY

Kahului ramp. Motored out harbor entrance (noted Hydra musiformis on rocks by ramp, along with Ulva). Pterocladia growing on cement basins on west only side of harbor entrance. Photos taken.

DATE of Harbor  
"EXTENSION"SCUBA #5  
50 minutes AT 15'

Motored to off power plant - shallow water noted. Took several photos of plant, discharge and algae (Pterocladia, and Ulva growing in band above it). Motored over greenish "channel" - which is probably an area that dredge material was taken from. Anchored at the seaward end - a few narrow sand channels running seaward. Entered water at one of these and followed "edge" along to the left. Mostly 10' but some 15' depth. "Edge" of this area not distinct.

Detached  
Sargassum  
near beach

no undercut 'edges' for turtles to sleep under. Sand in the center, but along the edge there is harder material upon which large quantities of Codium, Acanthophora, Amanoa. Also collected

Scinia homoides (chain of spheres). Dictyosphaeria cavernosa seen up in shallow area of reef flat. A 3 Codium seen (edule, brevidia and arabicum), but edule was the most abundant.

Along the way toward shore, I found a scute from a small turtle (found).

SUNDAY

5 MAY 85

We came up in the channel where it "faded out", and noted substantially warmer water at the surface, even though we were aways out from discharge flows. Thermometer reading - 27.5-28°C at the surface, 24-24.5°C on the bottom. 24.5°C also recorded throughout column at our seaward-most point of visit. Shortly before leaving the water, I saw one of the only holes I would consider useable for a resting turtle.

Detached  
*Sargassum*  
near beach.

From 9:30 - 10:30 am we worked seaward and toward <sup>harbor</sup> searching for drop-offs, deeper areas where turtles might sleep. None detected because water was too "green". Will use depth finder and chart later.

Wind started blowing ~ 10 am, but not as strong as yesterday when it started before sunrise.

Moored boat by hotel because tide too low for boat ramp. (Sand below cement ramp). Puffed boat out ~ 1:30 pm and returned it to airport.

Telephoned  
6 pm talked to Rene Silva - He indicated that turtles have been shot at the power plant site. Taken for food. Also said that a month ago he saw "35-40 turtles" <sup>both</sup> big and small, feeding right close to shore at KAHIA Bay, first bay after Hoopika. Ironwood trees by the road, old road below, crawler fence and go ~ 30'. Turtles used

SUNDAY

5 MAY 85

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Detached  
*Boyeropsis*  
near beach.

From 9:30 - 10:30 am <sup>harbor</sup> five turtles seaward and toward, searching for drop-offs, deeper areas, where turtles might sleep. None detected because water was too "green". Will use depth finder and chart later.

Wind started blowing ~ 10 am, but not as strong as yesterday when it started before sunrise.

Moved boat by hotel because tide too low for boat ramp. (Sand below cement ramp). Pulled boat out ~ 1:30 pm and returned it to airport.

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114  
SUNDAY  
5 MAY 85

Res. on Flight 33 4:12pm MAY 10<sup>th</sup> Friday depart  
(Creed airport van)

6 MAY  
MON

to be netted here ~~in all~~ before. He said  
Maliko always had a few turtles -  
but not great numbers.

Dinner at Pizza Hut \$6.<sup>00</sup>; Bread at <sup>Safeway</sup> \$2.<sup>00</sup>  
Checked powerplant at 7:45 pm - Light  
winds, calm seas - no moon out yet.

HEAD COUNTS

7:45 pm - 1	7:49 - 1	7:53 - 5
46 - 3	:50 - 0	7:54 - 1
47 - 1	:51 - 3	7:55 - 4
48 - 0	:52 - 1	

Low counts possibly due to presence of fishers earlier in evening; or carryover from disturbance during previous evening's (fishers last night and me Thursday night).

KEOMUKU, LANAI  
20°51'N 156°50'W

6 MAY 85  
MONDAY

Up at 4:30am - breakfast at Tasty Crust 3.  
Trailer to Capt. Kenos and Mala Wharf -  
photos of launch at 7:45am. TO Lanai just  
off Kenos village palm trees - north of where reef  
starts - Anchored in sand channel ~20'  
Some overcast - glassy seas, excellent visibility  
Robert and I followed distinct narrow  
sand channel seaward, immediately saw  
several undercut sites with marks in  
silt/sand bottom indicative of turtle use.  
At 30' we found one under a ledge -  
swan out before I could grab it and

Anchored here because we saw a couple turtles at the surface.

①

SCUBA #6 ①



6 MAY 85  
MONDAY

All 3 turtles tried to bite like  
dogs!

115

crashed into coral overhang - breaking some  
off. Swam it back to Alan in the boat.  
Noted that commercial dive boat had anchored  
a short distance to the south of us -  
still in front of temoku palm trees.  
We started to descend again and Robert noticed  
a turtle in the adjacent sand patch resting  
near coral edge. Drove on it, but it swam off  
before we could catch it. Another one took  
off to the left in the same area, returned to original  
channel and continued seaward. 2 more came  
out from resting, and we caught and 3rd seen.  
Knocked Robert's mask partly off - swam we  
in circles. Alan noted to us. While  
putting the turtle in the boat, we drifted more to  
the north (tidal current). Going down, we  
caught a 3rd turtle - saw 3-4 more.  
More drifting to the north. One the original  
sand channel seaward, we saw a turtle  
on the bottom between to low coral  
pieces, resting on the bottom. Left flipper was  
over its back. I got right over it at 50'  
and dropped to it at 55', but it swam away  
fast. From 55' the bottom drops rapidly  
to sand bottom. Channel ends at (50')  
followed capture of 3rd turtle, we swam to  
the north, searching in a similar manner.  
No turtles seen (Robert above saw one in  
the distance?). After coming aboard,

SCUBA  
#6

① + ③

①

①

①

① ①

6 MAY 85  
MONDAYDIVE #6 - 60' - 60 minutes  
(quick drop to 55' - most 35-45')

we motored along the reef to the north, nearly to the containers on the beach (1/2-mile distance?). Many sand channels running way offshore, but more swell here.

TURTLE #1

7264

RHIND

S- 62.3 x 48.7

notch 61.9

7265 LFL

C- 66.0 x 59.5

7266 RFL

PL- 50.8

2nd turtle

HEAD - 6.3

KAMUKU

TAIL - 11.0

RFF - 9.7

left eyelid cut & bleeding. Swirls in cornea; red skin alga; small amount of pink coralline.

No turtles seen at the surface. glassy & clean. Motored back to coconut trees at where I thought commercial dive boat had been.

NAME - AQUANAUT

Surface temperature of seawater - 25°C

→ DIVE #7 < 50' for 56 minutes. Current reversed now flowing south apparently due to tide.

(CONTINUED  
PAGE 118)

6 MAY 85 What CAUSES SAND CHANNELS?  
 MONDAY AERIALS of LANAI?  
 Lava ridged overgrown w/corals??

NOTE!  
 NO TURTLES LARGER THAN THIS ONE WERE SEEN!

TURTLE #2 S-75.8 x 57.3  
 NO NOTCH

C-81.5 x 76.0

7261 RHIND

7262 RFL PL-61.3

7263 LFL HEAD-10.3

3rd turtle  
 KEOMUKU

TAIL-15.0

RFF-12.3

Red alga on neck and pelvis. Wild biting.  
 Scummy carapace - skin barns.  
 Dark stains in mouth. Amphipods in mouth.  
 Red pink coralline on PL & carapace - small amounts.  
 Red juice came from mouth while tilted dead down on its back in Zodiac.

TURTLE #3 S-65.8 x 51.9  
 notch-65.4

7267 RFL

C-69.5 x 64.0

7268 LFL PL-52.7

HEAD-9.5

7269 TAIL-13.5

RHIND RFF-10.6

Sample No. 7267-Lanai 5-6-1985

Amansia glomerata	99%
Hypnea cervicornis	Trace
Jania capillacea	Trace
Sargassum polyphyllum	Trace
Amphipods	Trace
Copepods	

4th turtle  
 KEOMUKU

sent to  
 Dennis  
 Russell

Red alga neck & pelvis  
 Pink coralline along seams of carapace.  
 Skin barns on tail & pelvis. Amphipod came out  
 of nostril. Inserted stomach tube - plots  
 taken. obtained pieces that look like Amansia  
 and are part of Chordocochis (?). NYI

H<sub>2</sub>S smell from?  
Smelled on steps.

CARL HELM SAYS IT'S FROM  
ELSEWHERE - POSSIBLY SEWAGE  
TREATMENT

6 MAY

MONDAY

POWER PLANT  
HEAD COUNTS

7:47 <sup>pm</sup> - 7	7:53 - 4
:48 - 2	54 - 3
49 - 3	55 - 3
50 - 10	56 - 4
51 - 5	57 - 4
52 - 5	

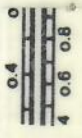
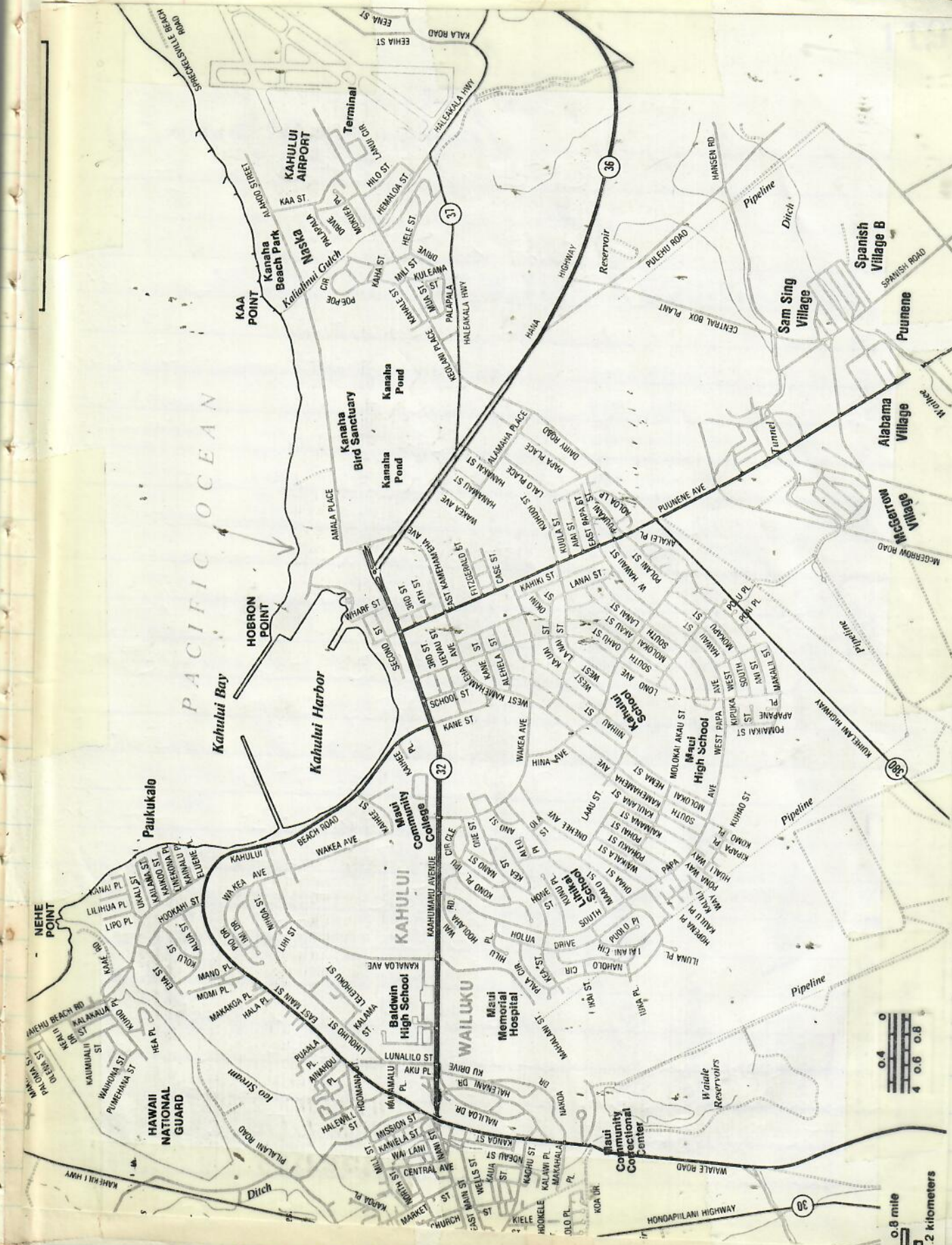
Light wind - Rain clouds  
"pool" slightly to the  
right.

(CONTINUED FROM P. 116 NARRATIVE)

Followed along 50' "Trop" scanning bottom seaward and watching for sand channels to inspect toward shore. None found of any discreet nature. Mostly complete cover with no breaks. No turtles seen. Toward end of dive, we moved in to shallower water close to wave break. Within solid coral crevices (creeks) I found abundant amounts of *Amorpha* growing on the sides; layers of silt covering plants, but came off easily when jaggitated. Forced out rock when turtles eat it?

Returned to Mala wharf ramp  
~ 3:30 pm. Picked up bottles from  
New's "Sea Snake" - telephone USCG  
about our return.

Pizza ART, I believe - \$5.50



MAUI NEEDS

1. UW photos at discharge  
(Naughton or Nitta camera -)  
w/FLASH?
- 2.

MEX 469 - 4/11/85  
 Toyota  
 Pick up  
 4WD  
 Grange

MAUI POWER PLANT  
 Fisherman's vehicles -  
 359 MAT  
 Brown Toyota  
 4WD Pickup

# METRIC SYSTEM WITH U.S. EQUIVALENTS

## METRIC UNIT (1) U.S. EQUIVALENT

### LENGTH

millimeter	(mm)	0.04 inches
centimeter	(cm)	0.39 inches
decimeter	(dm)	3.94 inches
meter	(m)	39.37 inches
decameter	(Dm)	32.81 feet
hectometer	(hm)	109.36 yards
kilometer	(km)	0.62 miles
myriameter		6.2 miles

### AREA

square centimeter	(cm <sup>2</sup> )	0.155 sq. inches
square meter	(m <sup>2</sup> )	1.196 sq. yards
are	(a)	119.60 sq. yards
hectare	(ha)	2.47 acres
sq. kilometer	(km <sup>2</sup> )	0.3861 sq. miles

### WEIGHT

milligram	(mg)	0.015 grains
centigram	(cg)	0.154 grains
decigram	(dg)	1.1543 grains
gram	(g)	0.035 ounces
decagram	(Dg)	0.353 ounces
hectogram	(hg)	3.527 ounces
kilogram	(kg)	2.2046 pounds
quintal		220.46 pounds
metric ton		1.1 tons

## METRIC UNIT (1) U.S. EQUIVALENT

### VOLUME

cubic centimeter	(cm <sup>3</sup> )	0.061 cubic inches
cubic decimeter	(dm <sup>3</sup> )	0.0353 cubic feet
cubic meter	(m <sup>3</sup> )	1.31 cubic yards
cubic decameter	(Dm <sup>3</sup> )	13.10 cubic yards

### CAPACITY, CUBIC

milliliter	(ml)	0.06 cubic inches
centiliter	(cl)	0.6 cubic inches
deciliter	(dl)	6.1 cubic inches
liter	(l)	61.02 cubic inches
decaliter	(Dl)	0.35 cubic feet
hectoliter	(hl)	3.53 cubic feet
kiloliter		1.31 cubic yards

### CAPACITY, DRY

deciliter	(dl)	0.18 pints
liter	(l)	0.908 quarts
decaliter	(Dl)	1.14 pecks
hectoliter	(h)	2.84 bushels

### CAPACITY, LIQUID

milliliter		0.27 fluidrams
centiliter		0.338 fluidounces
deciliter		0.21 pints
liter		1.057 quarts
decaliter		2.64 gallons

