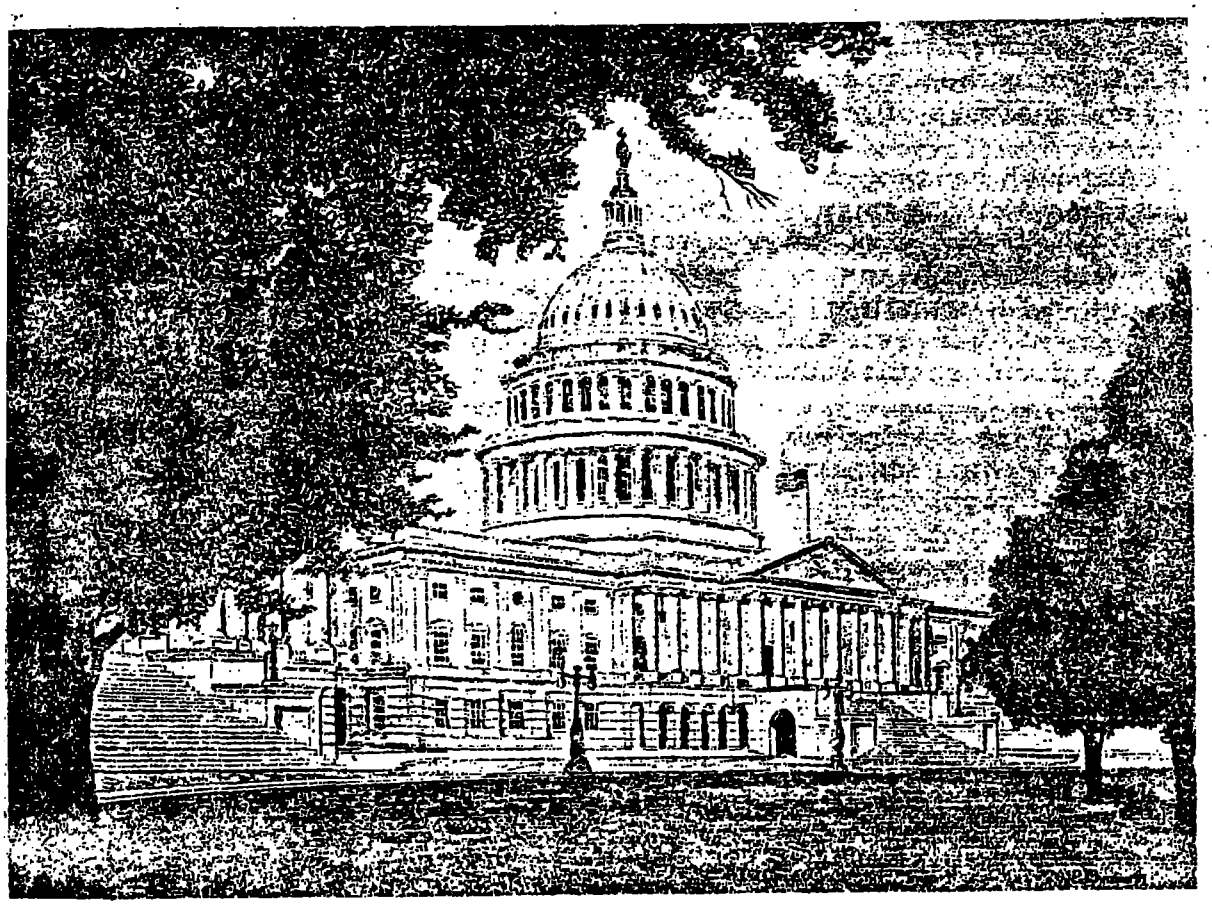
ie L.C. 6900632

newsletter...

NATIONAL OCEANOGRAPHIC DATA CENTER

No. 11-69 Washington, D. C. 20390 November 1969
Telephone: OXford 33745 (Area Code 202)



Dr. Austin Testifies on Capitol Hill

On October 9, 1969, Dr. T. S. Austin, Director of NODC, testified before the Subcommittee on Oceanography, Committee on Merchant Marine and Fisheries of the House of Representatives, chaired by the Hon. Alton Lennon (D., N. C.). The Subcommittee is conducting hearings on the report of the Commission on Marine Science, Engineering, and Resources, "Our Nation and the Sea," and H. R. 13247. Both recommended

Receiving information from a avigation system such as the U. S. avy Navigation Satellites, SKAMP's lectronics and servo systems ma- ipulate the vessel's air foils and udders to guide her to her station. nce there, SKAMP will sail a tight back-and-forth" course to remain ithin 0.2 nautical mile of her as- igned true position.

Versatility of the SKAMP plat- rm enables her to accept virtually ıy type of sensor, suiting her to sks such as charting ocean cur- nts or monitoring surface weather remote points. In all its applica- ons, SKAMP could function alone as part of a far-flung, precisely sitioned network. She also could company oceanographic vessels.

The vessel is designed to sail in rricane-force winds. Since she is nd-driven, SKAMP sails silently th no internal power required for opulsion.

Because she requires infrequent aintenance, SKAMP can be oper- ed at significantly less cost than ıer systems and would pose no zard to ships, since she is kept on ıtion by an "electronic tether" ther than a cable.

Global capability of SKAMP, de- yable from either a shore instal- ion or a ship, would result from r operation with the U. S. Navy vigation satellites. (Source: Tom liott, RCA Defense Electronic oducts, Moorestown, N.J.)

ave-Force Data for Gulf of Mexico Available

The Chevron Oil Field Research mpany, representing Standard Oil mpany of California, in coopera- n with Esso Production Research Company, Shell Development Company, and the U. S. Navy at Port Hueneme, have deposited at NODC some basic experimental wave-force data for the Gulf of Mexico. The data comprise wave forces and wave heights taken during storm conditions at two locations in the Gulf of Mexico.

The following data may be obtained on loan from NODC for copying purposes:

1. Microfilmed oscillograph records (16-mm.), raw records of wave forces, profiles, and auxiliary traces.

   a. Wave Project I (6 reels): 205 hrs. of records from hurricanes, tropical storms, and winter storms.
   b. Wave Project II (3 reels): 77 hrs. of records from one hurricane and several storms.

2. Reports on microfilm (16-mm.) covering platform design, construction, and maintenance, instrument calibration, selected wave-pressure contours, data reduction methods, and magnetic tape format descriptions.

   a. Wave Project I: 6 reports on 1 reel of microfilm.
   b. Wave Project II: 6 reports on 1 reel of microfilm.

3. Digitized data on magnetic tape--wave forces and profiles and related calibrations; magnetic tape compatible with IBM 7074 system (7-channel, 556-b.p.i.).

   a. Wave Project I: Approximately 500 individual waves digitized at 0.2 sec. intervals.

b. Wave Project II: Approximately 100 individual waves and 76 min. of continuous records digitized at 0.2 sec. intervals.

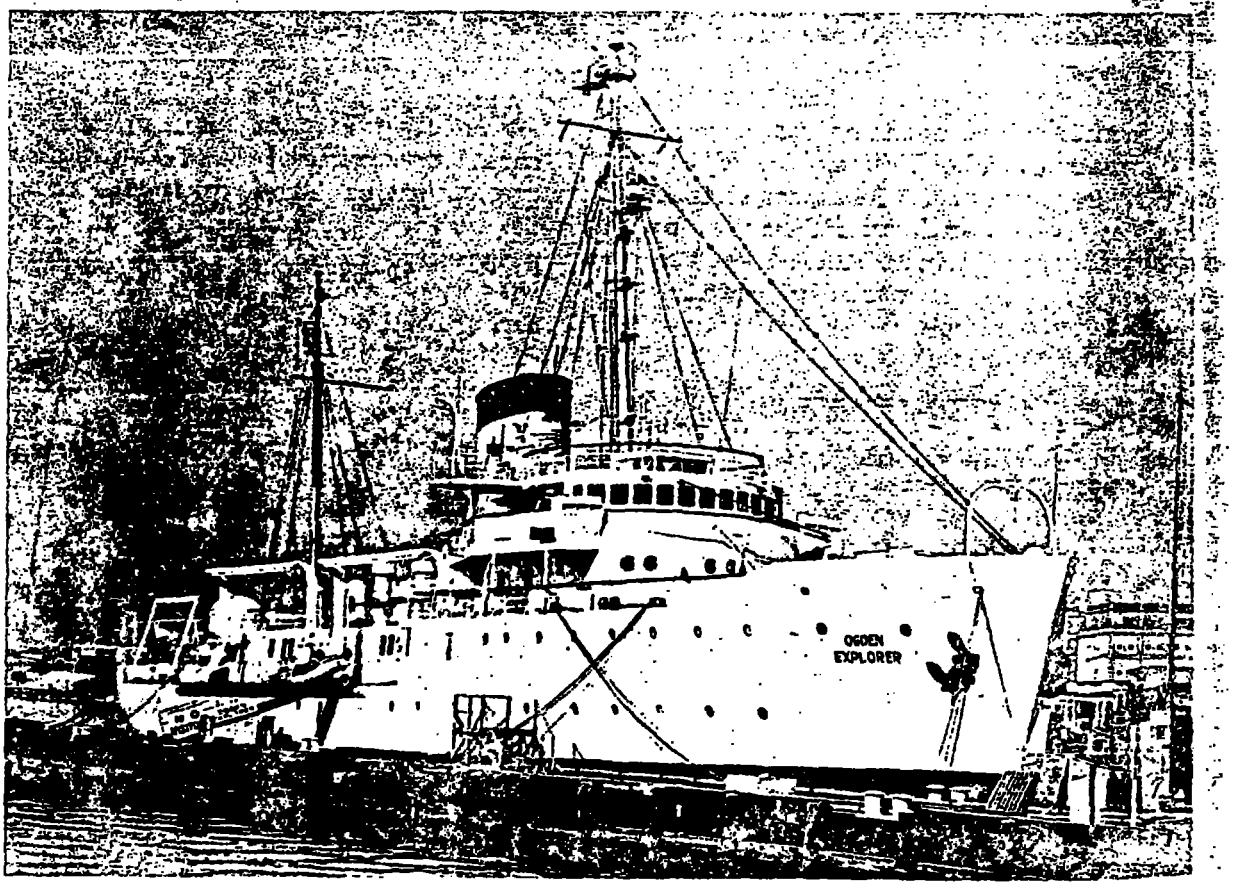
Wave Project I (1954-1958), with platform located in Bay Marchand, La., in 33 feet of water, contains data for hurricanes Flossy(1956), Audrey(1957), and Ella(1958), and tropical storms Bertha(1957) and Esther(1957). During Wave Project II (1960-1963), with the platform located at 28° 47' N and 90° 12' W in 100 feet of water, waves were recorded from hurricanes Donna (1960), Ethel(1960), Carla(1961), and Inge(1961).

Please address all requests for these data to the National Oceanographic Data Center, Washington, D. C. 20390, Attn: Henry Odum.

EXPLORER Graduates Employed

Graduates of a unique trainin program designed to convert unem ployed or underemployed inner-cit (Washington, D. C.) young men int needed oceanographic aides wer hired recently by the U.S. Naval Oceanographic Office.

The 22 alumni -- the majority o the first class to be graduated from the EXPLORER, a World War II vin tage oceanographic ship turned int a floating classroom by Ogden Tech nology Laboratories, Inc. -- started working as physical science aides, ocean charting aides, and also a trainees in chart printing and pro duction.



NODC Acc. # 69-0632

WAVE FORCE DATA SUMMARY

I. Microfilmed oscillograph records (16 mm), raw records of wave forces, profiles, and auxiliary traces.

in D7761

A. Wave Project I: 6 reels, 100 ft. each, 16 mm

(205 hrs. of records from hurricanes, tropical storms, and winter storms)

B. Wave Project II: 3 reels, 100 ft. each, 16 mm

(77 hrs. of records from one hurricane and several winter storms)

II. Bound reports covering design, construction, maintenance, calibration, selected wave pressure contours, data reduction methods, and magnetic tape format descriptions.

in D7822

A. Wave Project I: 6 reports, about 300 pages total on microfilm

B. Wave Project II: 6 reports, about 250 pages total on microfilm

III. Digitized data on magnetic tape - wave forces and profiles and related calibrations; magnetic tape compatible with IBM 360 system.

Reels A100 & A101 (copies of)

A. Wave Project I: approximately 500 individual waves digitized at 0.2 sec intervals; one reel 2400 ft.; (individual waves were selected from hurricane records)

B. Wave Project II: approximately 100 individual waves and 76 min. of continuous records digitized at 0.2 sec intervals; one reel, 2400 ft.; (individual waves and continuous records were selected from hurricane records)

Note: All of microfilmed records (I) are not included in digitized data (III).

Type rec. 04508 & 04501

Four copies of each reel of microfilm have been made for loan purposes.

Compiled by:
Henry Odum

ERRATA FOR WAVE PROJECTS I AND II
USERS' GUIDES AND DATA

CORRECTIONS TO "WAVE PROJECT I DATA USERS' GUIDE"
by L. S. Blank, August 25, 1969

1. The statement on Page 1,

   "The complete installation has been described in detail by Schurman[1], and Thrasher and Aagaard[2]. A plan view is shown in Figure 1."

   should read as follows:

   "The complete installation has been described in detail by Schurman[1], Thrasher and Aagaard[2], and the reports listed in Appendix B. A plan view for data taken after August 1956 is shown in Figure 1. This figure applies to all the digitized data. Refer to Thrasher and Aagaard[2] for the plan view before August 1956."

2. Replace Figure 1 on Page 1 with the Figure 1 in the Errata.

3. The section "Correction for Staff-Dynamometer Separation Distance" on Page 18 should be replaced by the following:

   "Correction For Staff-Force Piling Separation Distance.

   "Two problems are inherent in the use of force data that is recorded at a location that is different from the location that the wave profile is measured. First, there is a time lag, Δt, between the wave profile and the force records that is a function of the separation distance and wave direction. Secondly, the shape of the wave changes as it propagates and is not necessarily the same along each section of the crest line; this implies that the time variation of the wave profile at the force piling location is not necessarily the same as at the staff location. These problems were taken into account when digitizing the data.

   "The time lag for a given wave and force piling was calculated in the following manner. The time at which each of the out-of-water force dynamometers was first activated was determined. The height of the water-surface elevation at each of those times is equal to the height of the bottom of the corresponding dynamometer measured from the mudline. The distance to the bottom of each dynamometer was transferred to the wave profile by utilizing the wave-staff calibration steps that appear at the beginning of each record (see Figure 10) and the times were noted. The average difference between the times noted on the staff profile and those corresponding to dynamometer activation over all the out-of-water dynamometers was taken as the time lag, Δt.

"The amount of time lag by which each force data file has to be adjusted is located in Columns 49-54 of Card 1. This value is given in inches and can be converted to seconds by

$$\Delta t \text{ (sec)} = 4.0\Delta t \text{ (inches)} \qquad (4)$$

"A forward or backward shift is indicated by the sign of Δt. If $\Delta t > 0$, the wave staff was struck first, while $\Delta t < 0$ implies that the force piling was struck first. Consequently, the times in inches for the force data must be adjusted as follows:

$$TIME(J) = TIME(J) - \Delta t.$$

"The change in wave shape was accounted for in the following manner. In certain cases, for a given wave and force piling, the Δt varied according to the dynamometer that was used. This implies that the time variation of the wave profile at the force piling differed from that at the wave staff. In such cases, an 'effective' wave profile at the force piling was reconstructed by transferring the wave profile developed from dynamometer activation times onto the measured staff wave profile using the time lag (average Δt) to align the two profiles and then sketching in a new wave profile that passed through the points defined by the dynamometer activation times.

"The digitized data correspond to 'effective' wave profiles. The user should refer to the original data on microfilm for modifications made to the staff wave profiles."

4. The following corrections should be made to the Data File Numbers listed in Table I:

"21080152" should read "21080154"

"21087193" should read "21087192"

"21515133" should read "21515113"

ERRORS IN THE DIGITIZED WAVE PROJECT I DATA

The following error exists for the digitized data included in Data File 21067022:

YBAR is set equal to YC. This causes an overflow in calculating V(I), as defined by equation (3). Refer to original data on microfilm and the reports listed in Appendix B of the Guide for corrections.

ERRORS IN THE DIGITIZED WP II DATA.
Reference: "Wave Project II Users' Guide"
by L. S. Blank, May 23, 1969.

1. The Continuous Section 06886-1/01 has the following error:

   The last values of file 1/08 and first values of 1/09 have the same time values. Refer to data on microfilm for necessary corrections.

2. The Continuous Section 06886-2/01, file 2/16, has the following errors in the wave profile data:

   a. Time values for time indices I = 18 and 19 are the same.

   b. Time value jumps from 89 to 188 in going from the time index 19 to 20.

   c. REF(I) is zero and ETA(I) is too large at I = 19.

   Refer to data on microfilm for necessary corrections.

Attach: Figure 1

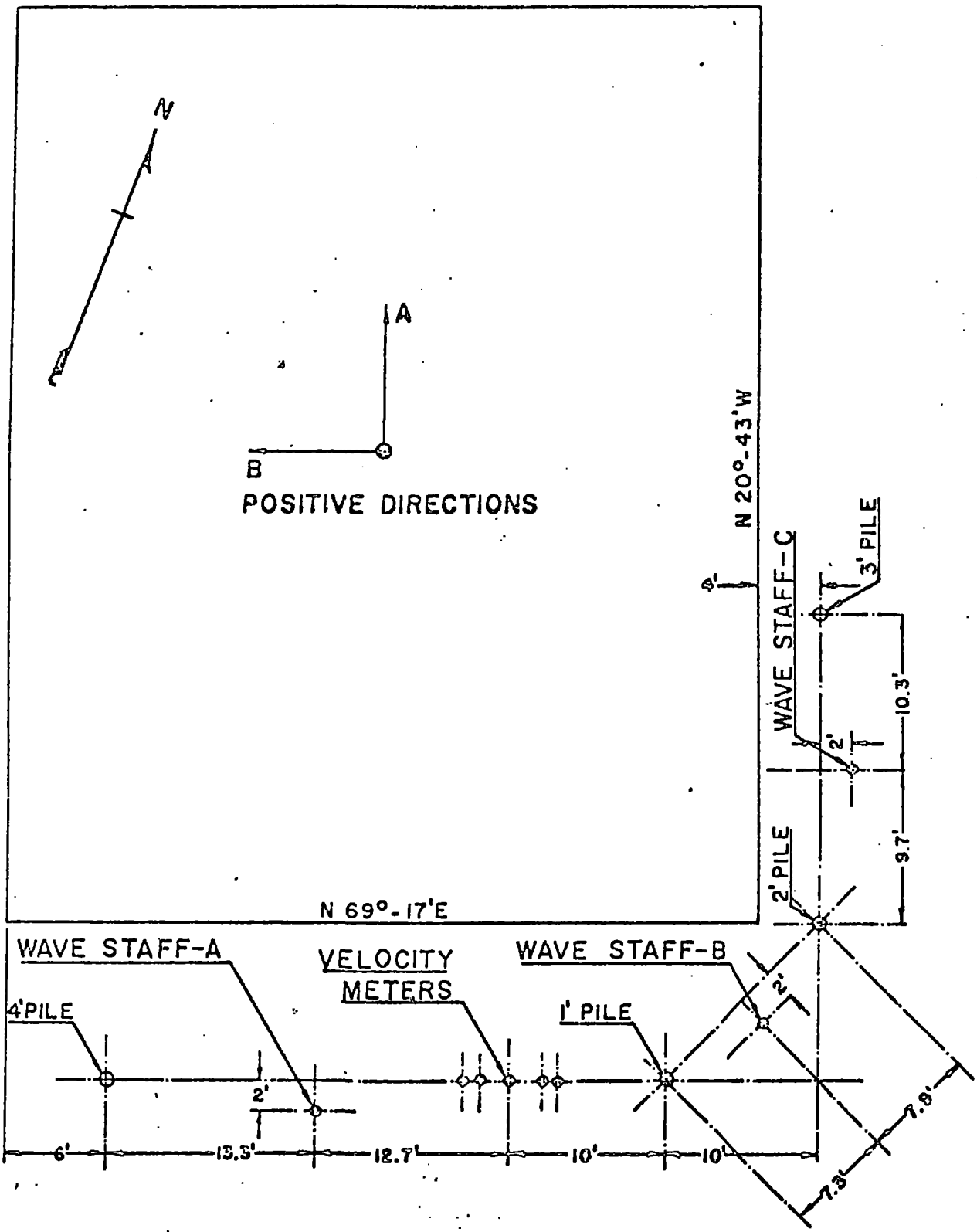


FIGURE 1
PLAN VIEW OF TEST UNITS (AFTER AUGUST 1956)

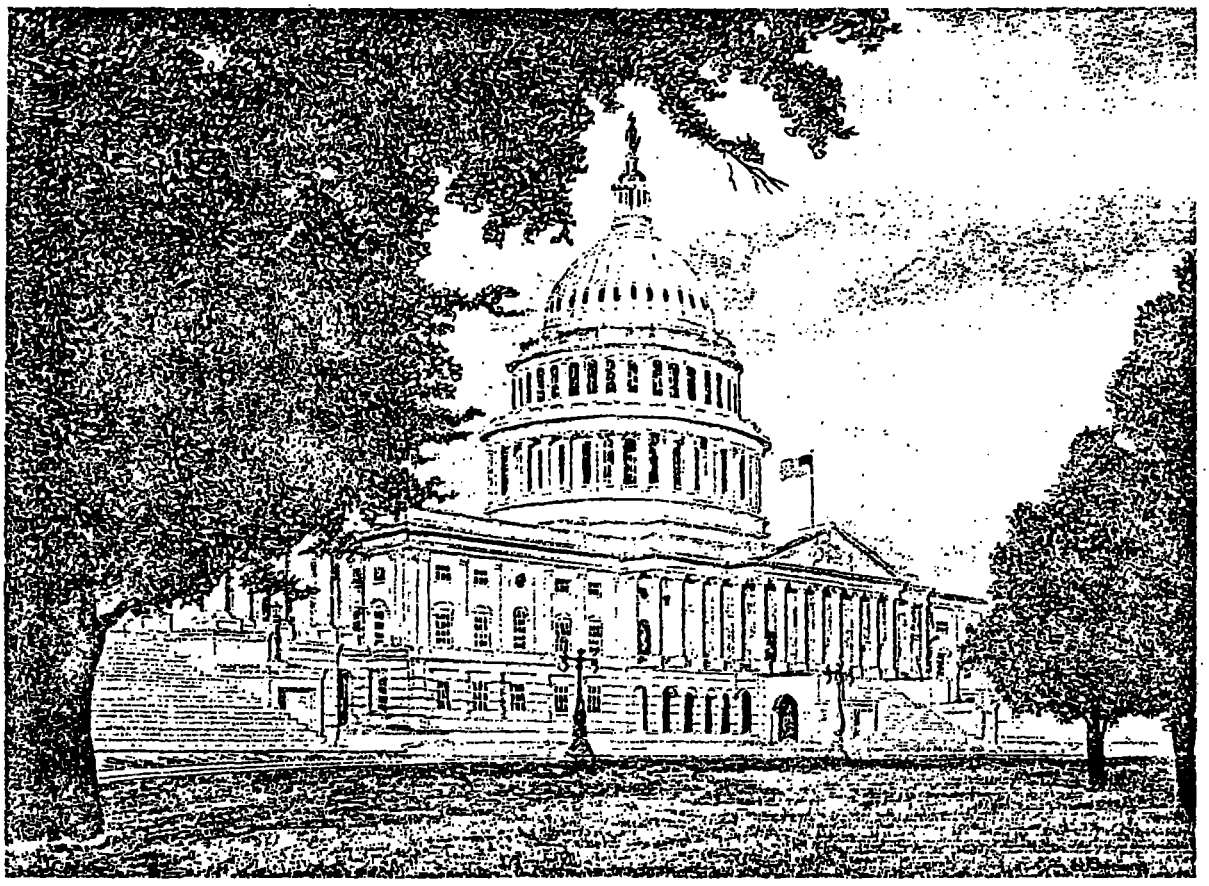
SCALE: 1/10" = 1'

CALIFORNIA RESEARCH CORPORATION OIL FIELD RESEARCH LA HABRA LABORATORY		
DRAWN: D B	DATE: 10-29-57	LE 30-399
ENG'R: L S	PROJ: 8112	

The
newsletter...
NATIONAL OCEANOGRAPHIC DATA CENTER

No. 11-69 Washington, D. C. 20390 November 1969
Telephone: OXford 33745 (Area Code 202)

see page-9



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Global capability of SKAMP, deployable from either a shore installation or a ship, would result from her operation with the U. S. Navy navigation satellites. (Source: Tom Elliott, RCA Defense Electronic Products, Moorestown, N.J.)

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   a. Wave Project I: Approximately 500 individual waves digitized at 0.2 sec. intervals.

Rec'd.
10-21-69

MEMORANDUM GO-144

TO: MR. Henry Odum — NODC — Oct 16 1969

FROM: MR. Les Blank. — COFRC

SUBJECT: OUR FILE:

YOUR FILE:

Henry:-

As mentioned in my memo yesterday, enclosed please find the tape volume containing the Wave Project II data.

The tape is unlabelled; written at 556 bpi density, and contains BCD data.

Record format is FIXED BLOCKED
Logical record length is 80 bytes (characters)
Physical record length (block size) is 1600 bytes (characters)

I have tested the volume by successfully retrieving files 1, 53, 54 and 177. You should have no problem. Data sets are sequential and correspond to the file directory in my report on WP II data.

My apologies again for the delay.

Sincerely

Les Blank.

Rec'd. 11-3-69

MEMORANDUM GO-144

TO: MR. Henry Odum — Oct 30 — 1969

FROM: MR. Les Blank

SUBJECT: WPI 7 trk & 9 trk tape volumes. OUR FILE:

YOUR FILE:

Henry: —

Here at long last are the data tapes from Wire Project I. I must apologize again for the delay but our computer has had the 7 day flu!

The 7 track tape is a non-labelled tape written at 556 bpi. Non-labelled means no volume label or header & trailer labels. To be read on a 360, LABEL = (X, NL) must be coded in the label parameter while UNIT = 2400-2 is the unit parameter code. The reel is labelled WPI7T.

The 9 track is an 800 bpi, standard label tape as described in my report (complete compatability on 360). The reel and the volume are labelled NODC02. Each data set is named WPI.

Hope we can now get into the newsletter.

Thanks for your patience,

Sincerely Les Blank

CHEVRON OIL FIELD RESEARCH COMPANY
A STANDARD OIL COMPANY OF CALIFORNIA SUBSIDIARY
LA HABRA LABORATORY P.O. BOX 446 LA HABRA CALIFORNIA 90631

August 29, 1969

Dr. Thomas S. Austin, Director
National Oceanographic Data Center
Washington Naval Yard, Building 160
Washington, D. C. 20390

Dear Dr. Austin:

This is in further response to our exchange of correspondence regarding deposit of wave force data at the National Oceanographic Data Center.

We are sending under separate cover an additional partial shipment of the wave data as described and agreed upon in our prior correspondence. The present shipment is the last one contemplated and completes the deposit of wave force data which we had planned. The present shipment consists of the following items:

1. Six rolls of 16 mm microfilm giving oscillograph records of wave height and wave force data as originally recorded.

2. One 2400-foot reel of magnetic tape containing reduced data in digital form of wave data files. ✓

3. Six reports on Wave Project I. These reports describe in detail the experimental program which we have termed Wave Project I.

4. A revised Wave Project II Users' Guide. This is identical in every respect with the single copy of the Wave Project II Users' Guide which we forwarded to you under date of June 3, 1969, except that page 38 has been revised. We suggest that you destroy the original Wave Project II Users' Guide containing the incorrect page 38.

Henry Odum

Please do not hesitate to call on us if we can be of assistanc in any questions which may arise concerning the information we have sent to you.

Yours very truly,

J. B. Justus, Vice President
Production Research Department

cc: Mr. R. F. Faull

Reports, microfilm, and tape sent Registered Mail.

CHEVRON OIL FIELD RESEARCH COMPANY
A STANDARD OIL COMPANY OF CALIFORNIA SUBSIDIARY
LA HABRA LABORATORY P.O. BOX 446 LA HABRA, CALIFORNIA 90631

J. B. JUSTUS
VICE PRESIDENT
PRODUCTION RESEARCH
DEPARTMENT

June 3, 1969

Dr. Thomas S. Austin, Director
National Oceanographic Data Center
Washington Naval Yard, Building 160
Washington, D. C. 20390

Dear Dr. Austin:

This is in further response to our exchange of correspondence regarding deposit of wave force data at the National Oceanographic Data Center and, in particular, with respect to Mr. Faull's letter of March 14, 1969, and your reply of April 1, 1969.

We are sending under separate cover a partial shipment of the wave data as described and agreed upon in the subject correspondence. The present shipment consists of the following items:

I. One 2400 foot reel magnetic tape, labeled NODCDA.

II. Three reels microfilm.

III. Six reports (1 each)

1. The Clamp-On Wave Force Meter, L. Skjelbreia.
2. Design, Construction, and Installation of Instrumentation for Wave Project II, V. Schoettle
3. Operation of Wave Project II, Progress Report No. 3, V. Schoettle.
4. Operation of Wave Project II, Progress Report No. 4, V. Schoettle.
5. Operation of Wave Project II, Final Progress Report, V. Schoettle.
6. Wave Project II Data Users' Guide, L. S. Blank.

Henry Odum

We were pleased to receive your very nice letter of April 1 and hope that the information currently being shipped and that which is to follow will turn out to be a valuable addition to the National Oceanographic Data Center. If you have any questions you would wish to discuss by phone, may I suggest you call Mr. P. M. Aagaard at La Habra (213 - 691-2241); letters should be addressed to me at La Habra rather than Mr. Faull with whom you have previously corresponded.

Very truly yours,

J. B. Jusfin

cc: Mr. R. F. Faull

CHEVRON OIL FIELD RESEARCH COMPANY
A STANDARD OIL COMPANY OF CALIFORNIA SUBSIDIARY
200 BUSH STREET SAN FRANCISCO CALIFORNIA 94120

L. F. FAULL
PRESIDENT

March 14, 1969

Dr. Thomas S. Austin, Director
National Oceanographic Data Center
Washington Naval Yard, Building 160
Washington, D. C. 20390

Dear Dr. Austin:

During recent years the Standard Oil Company of California has carried out a project to measure and record certain ocean behavior in the Gulf of Mexico. The projects have been managed and carried out by technical operating teams in two of Standard Oil Company of California's operating subsidiaries: Chevron Oil Field Research Company and Chevron Oil Company, The California Company Division. This latter is Standard of California's operating group in offshore Louisiana, and is headquartered in New Orleans.

The data gathering effort has been funded in approximately equal amounts by Chevron Oil Field Research Company, Esso Production Research Company, and Shell Development Company. The U. S. Navy at Port Hueneme, California, assisted financially by being a data purchaser on two occasions during the project term.

Chevron Oil Field Research Company, representing Standard Oil Company of California and on behalf of itself and Esso Production Research Company, Shell Development Company, and the U. S. Navy at Port Hueneme, wish now to deposit the basic experimental data with a public depository in such a manner that it would be available to consultants, contractors, universities, and such others that might make use of the data. I understand in discussing this with Dr. L. C. Bonham of our La Habra staff that the National Oceanographic Data Center would welcome the donation of this information, and we are thus very pleased to offer it to you for the Data Center.

Henry Odum

The data are essentially wave forces and wave heights during storm conditions at two locations in the Gulf of Mexico and consist of original strip chart records on microfilm; magnetic tapes containing digitized sections of recorded information; and a series of reports describing project equipment, measurement procedures, data reduction methods, calibrations, and the general method of operation of the projects. A more specific definition of the material will be furnished at the time the data are transmitted to you.

We are presenting papers on the wave force project at the First Annual Offshore Technology Conference in Houston, May 18-21. Shell and Esso are also presenting papers based on the same data at this meeting. We would plan on withholding actual transfer of our wave force data to the National Oceanographic Data Center until after the dates of this Offshore Technology Conference, that is, until approximately June 1 of this year.

We hope that you will accept deposit of our wave force information in your Data Center. We believe the information is unique and is of potential value to oceanographers and to people concerned with stability and safety of offshore structures. We look forward to hearing from you.

Yours very truly,

RFFaull

CHEVRON OIL FIELD RESEARCH COMPANY
A STANDARD OIL COMPANY OF CALIFORNIA SUBSIDIARY
LA HABRA LABORATORY P.O. BOX 446 LA HABRA CALIFORNIA 90631

April 25, 1969

J. B. JUSTUS
VICE PRESIDENT
PRODUCTION RESEARCH
DEPARTMENT

69-0632

Dr. Thomas S. Austin
Director
National Oceanographic Data Center
Washington, D. C. 20390

Dear Dr. Austin:

In response to your letter of April 1, 1969, to Dr. R. F. Faull, we are transmitting the following additional information on our wave force data and reports:

1. Wave Force Data Summary, which describes the form of data, number of reports, and number and size of microfilm and magnetic tape reels to be delivered to NODC.

2. Microfilm record sample.

3. Report abstracts.

The oscillograph records are not microfilmed as yet. The microfilm sample enclosed is a trial exposure made by a service company. Complete reports are not available as requested until date of data release; we hope the abstracts provided will be sufficient for your present need.

We plan to send the information in two installments. You will note from the attached description of the data, the information was derived from two projects which we have called Wave Project I and Wave Project II. We are well along in the organization of data from Wave Project II and expect to ship these data in late May. The data from Wave Project I should follow within a few weeks.

If you require further description of the wave force data, please write me or call Mr. P. M. Aagaard.

Very truly yours,

JB Justus

Attach: Wave Force Data Summary
Microfilm Record Sample
Report Abstracts (12)

Orig. of this ltr plus encls. routed thru 2110, 2101, 2120, 2200. 4/29/69

NATIONAL OCEANOGRAPHIC DATA CENTER
WASHINGTON, D. C. 20390

Code 20/mlg
April 1, 1969

AIRMAIL

Mr. R. F. Faull
Chevron Oil Field Research
Company
200 Bush Street
San Francisco, California 94120

Dear Mr. Faull:

We were most pleased to receive your letter of March 14 confirming the arrangements mentioned by Mr. Bonham during a recent phone conversation. We look forward with pleasure, but admittedly not without some trepidation, to the receipt of the wave data and reports.

We note that the fact that these data have been forwarded to NODC will be announced during the First Annual Offshore Technology Conference in Houston, May 18-21. We note also that you do not plan the actual transfer of the data until approximately June 1 of this year. In anticipation of requests for copies of the data which probably will result from the announcement in Houston, we would appreciate receiving samples of the strip charts (on microfilm), a description of the material on magnetic tape, and copies of the reports--all of which are mentioned in the fourth paragraph of your letter. Also for planning purposes, we would appreciate an estimate of the volume; e.g., number of reels of magnetic tape, rolls of microfilm, and linear footage of strip charts. Receipt of this information would permit early review of such problems as may relate to both the storage and release of these valuable data.

I invite your attention to the fact that this is the first significant release of marine data to us by a major oil company. We shall feature the fact in our NEWSLETTER, a copy of which is enclosed. This is a significant event in our lives, and we hope that it is but the first of many. At the risk of being presumptuous, we would be pleased to negotiate for copies of any non-proprietary geological data that may be available from your company.

I am scheduled to have the pleasure of meeting with the NSIA panel during the annual meeting this month. I hope that I may have the pleasure of meeting you or a representative of your company at that time. I plan to mention the release of the wave data as an example of the cooperation we are seeking.

Sincerely yours,

THOMAS S. AUSTIN
Director

Enclosure

Copy to:
Commander John Jorgenson, USN (Ret.),
NSIA

CHEVRON OIL FIELD RESEARCH COMPANY

A STANDARD OIL COMPANY OF CALIFORNIA SUBSIDIARY

200 BUSH STREET SAN FRANCISCO CALIFORNIA 94120

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PRESIDENT

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Yours very truly,

RFFaull

Code 2100/ehr
March 21, 1969

Comments re: R. F. Faull's letter (CHEVRON) of 14 March

I know we may be buying a "pig in a poke," but I believe we should take these data along with complete documentation as this does represent the first breakthrough with an oil company. Refusal at this time may kill future acquisition of more desirable data. The most we have to do with these data is to enter them in NAPIS, make copies of microfilm and/or magnetic tape(s), and Xerox reports when required because of consumer requests. Even though these data are referred to as "experimental," the two locations make these data valuable in evaluating or comparing storm conditions, wave generation, and progression. Perhaps if the observational period of these data coincide with NOMAD observations from the Gulf, these three locations together may be of interest to people working on air-sea interaction, etc. Let's not kill the goose that lays the (potential) golden egg; treat it as an opportunity for achieving bigger (oy weh) and better acquisitions from oil companies.

Robert V. Ochinero

ROBERT V. OCHINERO

Code 2101/ehr
March 24, 1969

Comments re: R. F. Faull's letter (CHEVRON) of 14 March

It is rather unique to receive any type of data from the oil industry. I do concur with Bob Ochinero's comment in accessioning these wave data. However, we must make every effort to tactfully obtain from the oil industry oceanographic data that would fit into our GDS system (data base or bases) and/or would be most advantageous to the oceanographic community.

The above comment is not intended to be in the negative, but once the breakthrough with the oil industry is attained (if this is possible), we should accession data that best fits our mission.

Irving Perlroth

IRVING PERLROTH

Code 2110/cmj
March 24, 1969

Comments re: R. F. Faull's letter (CHEVRON) of 14 March

Yes, we want these data. There is little I can add to the previous comments of Bob and Irv. These data are in a convenient form (microfilm and magnetic tape) for acquisition and appear to be well documented by a series of reports. The only question not answered in Faull's letter that may be of some concern to us--what is the volume of data involved and will we have any special storage problems?

Albert M. Bargeski

ALBERT M. BARGESKI

I agree with the recommendations of Messrs. Ochinero and Bargeski. I believe we had been briefed on these data two years ago--at that time the mention of 1/2 to 3 million punch cards involved in the analysis of three waves was somewhat staggering. Even then we were interested. Now tape is offered. The joker may be in the volume of microfilm, but we still want it and it is in our data responsibility. The use of the word "experimental" for such a long period of observation as is involved should not be a deterrent as offshore instrument wave records are almost unique at this time. I also have a question which may be of interest for our general plans for processing wave data: "How many requests for wave data has NODC received in its history?"

Suzy F. Bershad

SUZANNE F. BERSHAD

Code 2200-WIM/bh
March 25, 1969

Comments re: R. F. Faull's letter (CHEVRON) of March 14

Agree with Bob Ochinero in general; let's not kill the goose, etc. We should be delighted and grateful to acquire the data, assuming they are in such form that we can adequately respond to requests for same. As most wave data are now held by NWRC, we should eventually confer with NWRC and EDS as to their final disposition. However, we should not at this point refer Chevron to EDS, as this might be interpreted as overall lack of interest on NODC's part in oil company contributions.

As a first step, let's ask for sample tape, printout, microfilm, and documentation so that we can make sure that we (or NWRC) can service requests for copies, that data are adequately documented, etc. Let's also ask for info on volume of data, frequency, and period of record; it's strange Chevron makes no mention of the amount.

Any advertising of NODC's having received the data, either by Chevron or NODC, should wait on our confirming that we have a procedure for responding to requests for same. (Let's not repeat the debacle we had with the seismic profile records.)

Looking ahead, perhaps NODC and EDS should jointly develop policy on who does what with marine surface data.

WILLIAM L. MOLO

P.S. Have shown my comments to Jim Churgin; he said he had nothing to add to mine.

12/30/85

ID

CONDS INPUT/UPDATE WORKSHEETS

DIGITAL

FILE NAME: Chevron Wave Data FILE TAG: System generated DATE: 3/17/86

303 CATEGORY: Digital

304 FILE ALIAS (80),O,O: CHEVRON WAVE DATA

313 PERIOD OF RECORD * (29),M,M: 1969 04 25

315 GENERATION COMPUTER (12),O,N/A: VAX

316 ~~CHARACTER~~ CHARACTER CODE (16),M,N/A: ASCII

317 RECORDING MODE (10),M,N/A: Fixed

318 TAPE LABEL (20), M,N/A: NON-Standard

319 FILE STRUCTURE (80),O,N/A:

320 RECORDING DENSITY (4),M,N/A: 1600

321 TRACKS (1),M,N/A: 9

322 PARITY (4),M,N/A: NONE

323 BLOCK SIZE (10),M,N/A: 4800

324 DATA FILE RESPONSIBILITY (80),M,M: NODC/ Inventory AND Archive Branch

FILE NAME: Chevron wave data DATE: 3/17/86

326 FILE SIZE (10),M,N/A 6

327 DDS STATUS (8),M,M

332 DATA STORAGE LOCATION (80),O,O

Asheville North Carolina

334 RELATED NEDRES RECORDS*(80),O,O

401 SUPPLIMENTARY FILE DESCRIPTION (80XINF),O,O

CONDS [redacted] DATA WORKSHEET-(CONT'D)

FILE NAME: Chevron wave data DATE: 3/17/86

403 FILE NAME (80x3)

CHEVRON WAVE DATA

406 REMARKS(FILE)(80XINF.)* optional

CONDS DATA WORKSHEET

4D

FILE NAME: Chevron wave data DATE: 3/17/86

411 ABSTRACT (80x20) m

The purpose of this project was to evaluate, compare storm conditions, wave generations and progression.

CONDS DATA WORKSHEET

FILE NAME: Chevron Wave Data DATE: 3/17/86

416 F-DATA COLLECTION (80x20)* Optional

OBSERVING STATION TYPE:

OBSERVING STATION NAME:

INSTRUMENTATION:

DATA COLLECTION TYPE:

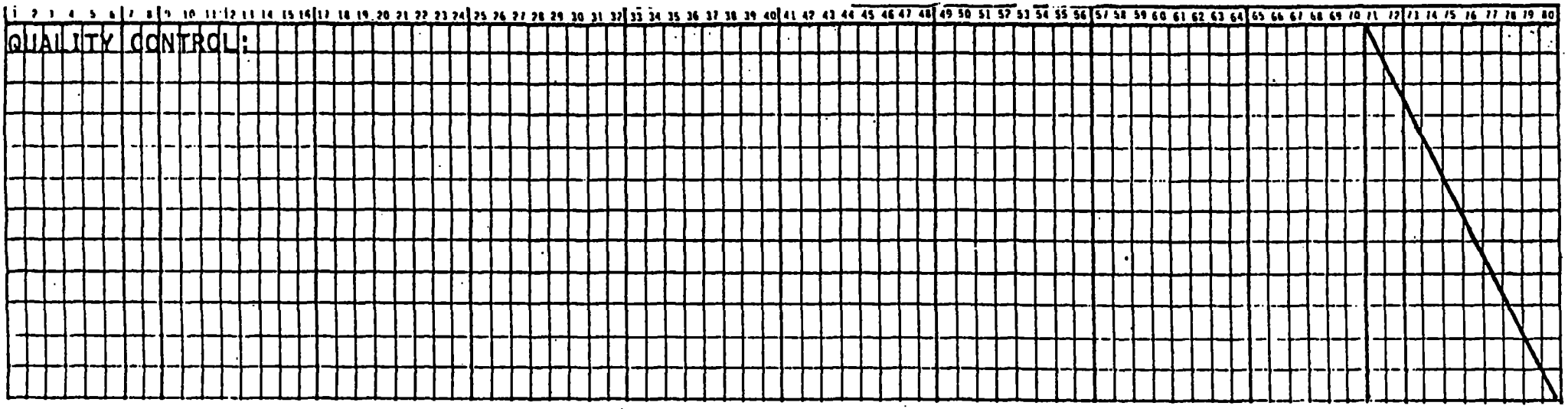
NUMBER OF SITES:

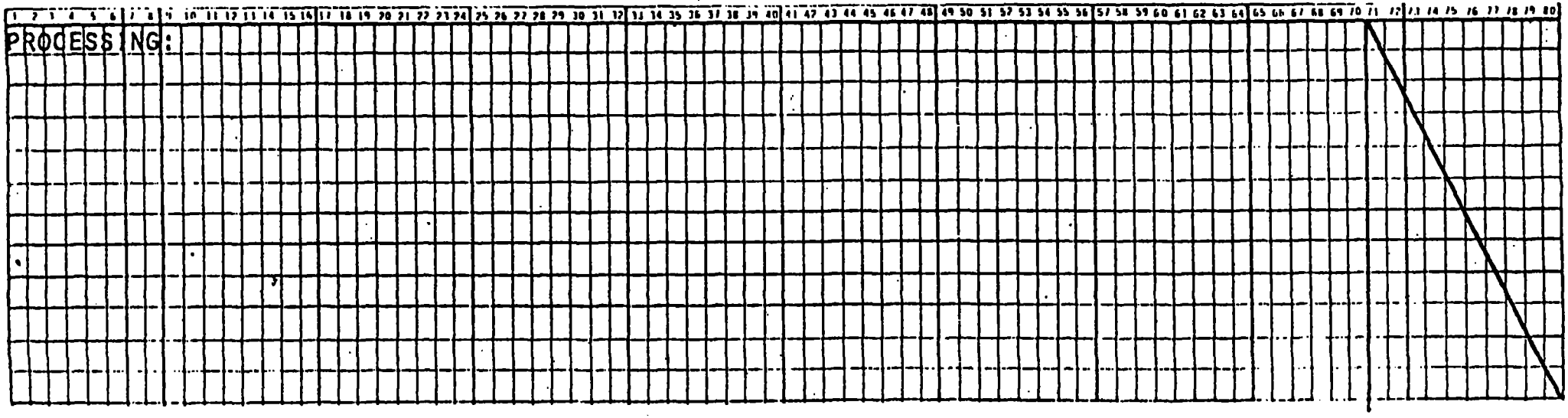
NUMBER OF OBSERVATIONS:

CONDS DATA WORKSHEET

FILE NAME: Chevron Ware Data DATE: 3/17/86

421 FILE QUALITY CONTROL (80x24)*(80x12EACH SUBFIELD) optional





CONDS DATA WORKSHEET

FILE NAME: Chevron Wave Data DATE: 3/17/86

428 GEOGRAPHIC COVERAGE(80x10)m

Gulf of Mexico

431 CONTACT ADDRESS FOR DATA(80x10) (NAME, PHONE NO, ADDRESS, CITY, STATE, ZIP, COUNTRY)

User Services Branch-Albert Bargeski
202-634-7500
PAGE Building I
2001 Wisconsin Avenue, NW
Washington, D.C. 20235
U.S.A

436 AVAILABLE FORMAT(80x6)

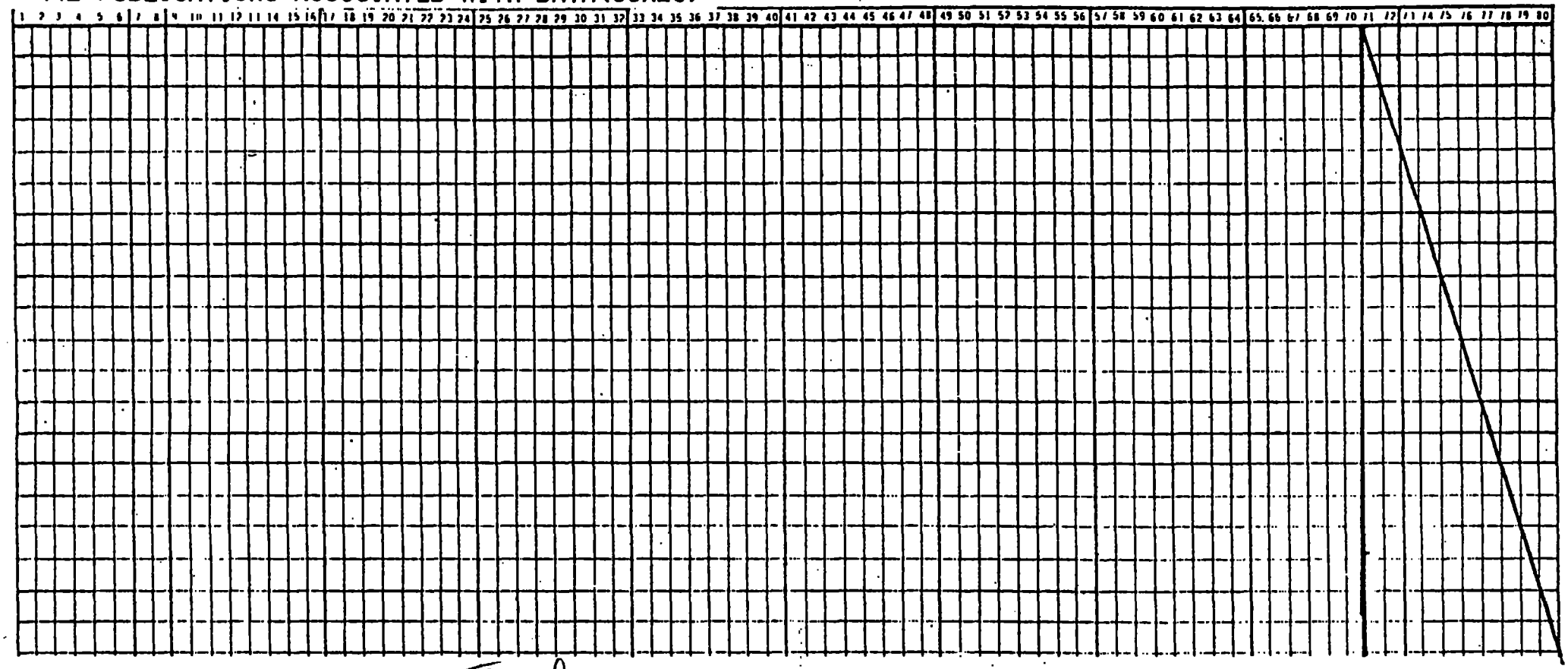
Two magnetic tapes available as Chevron Wave Force I and II.

CONDS DATA WORKSHEET

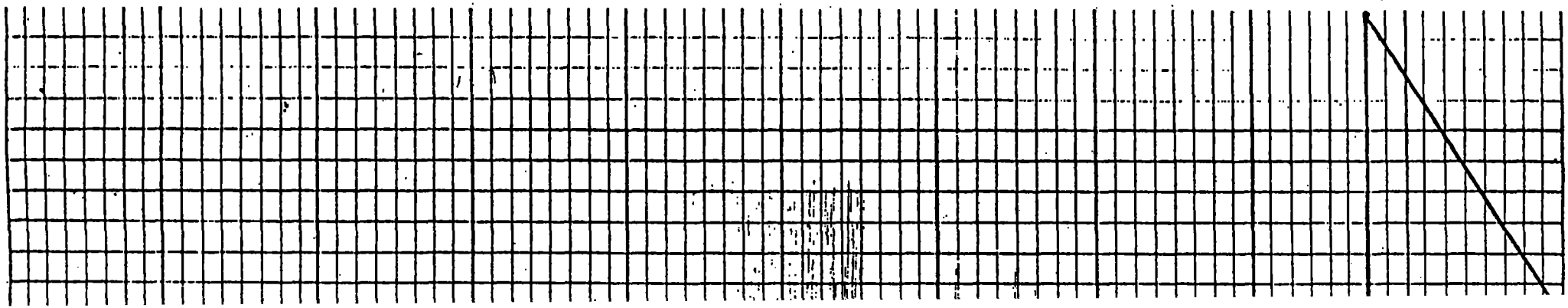
8D

FILE NAME: Chevron Wave Data DATE: 3/17/86

441 PUBLICATIONS ASSOCIATED WITH DATA(80x20)* optional



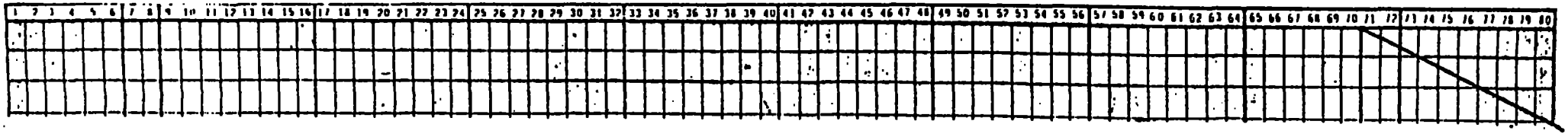
451 D-SUBJ TERMS(80x10)* optional



CONDS DATA WORKSHEET

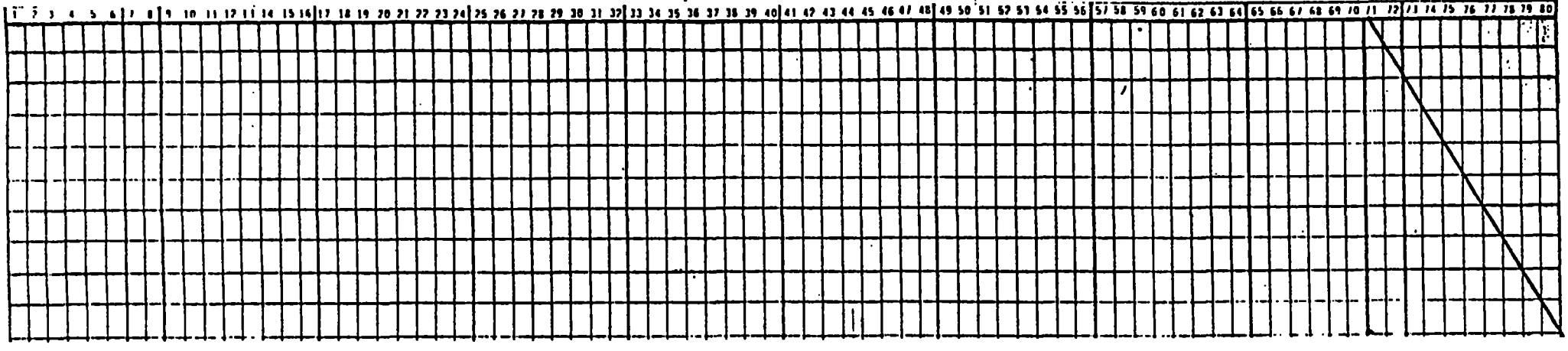
FILE NAME: Chevron wave Data DATE: 3/17/86

456 PRINCIPLE INVESTIGATOR(80x3)* optional



optional

461 PROCESSING ORGANIZATION ADDRESS (80x10)* (SAME FORMAT AS 431, IF SAME ADDRESS LEAVE BLANK)

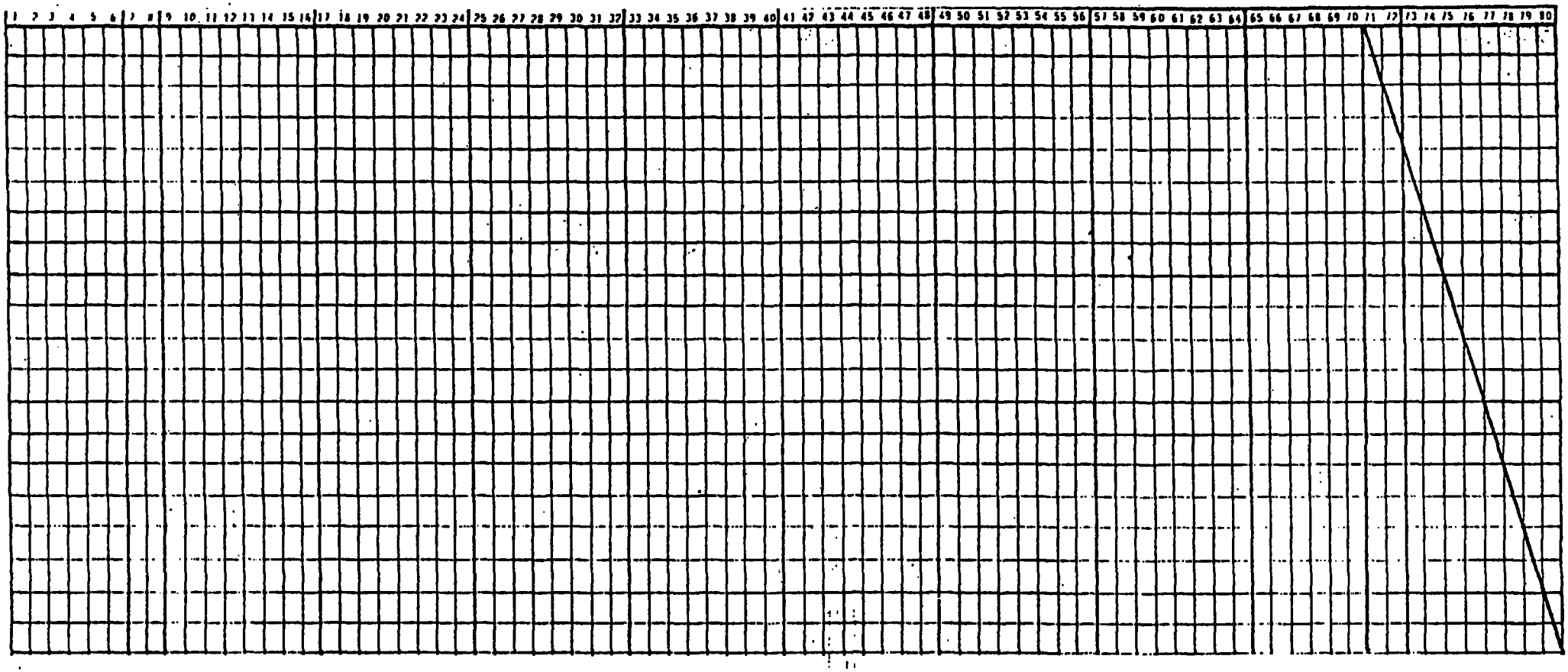


CONDS' DATA WORKSHEET

10D

FILE NAME: Chevron Ware Data DATE: 5/17/86

463 LENGTH OF RECORDS (80X20)* optional

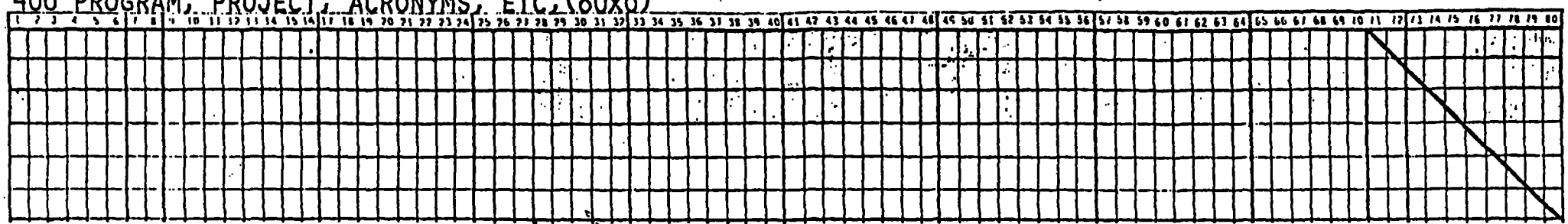


CONDS DATA WORKSHEET

IID

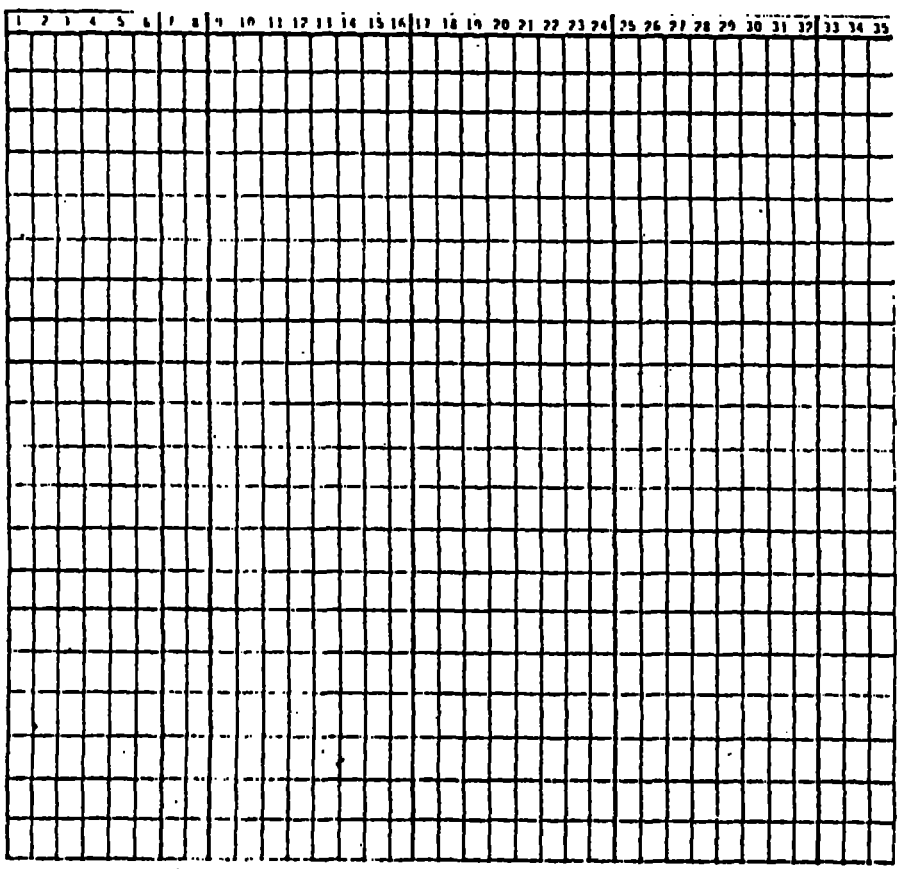
FILE NAME Chevron wave Data DATE: 3/17/86

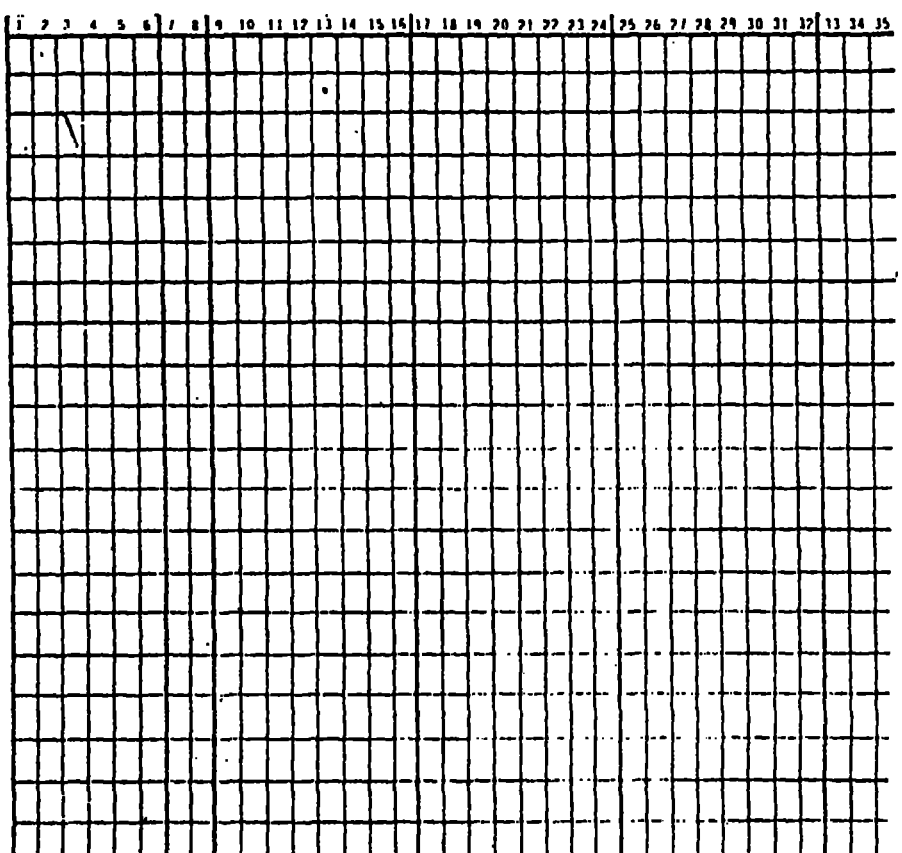
466 PROGRAM, PROJECT, ACRONYMS, ETC, (80x6)* optional



optional

473 GRID LOCATION (35x40)* (COMPASS LOCATION APPEARS FIRST EX N453000)





12/30/86

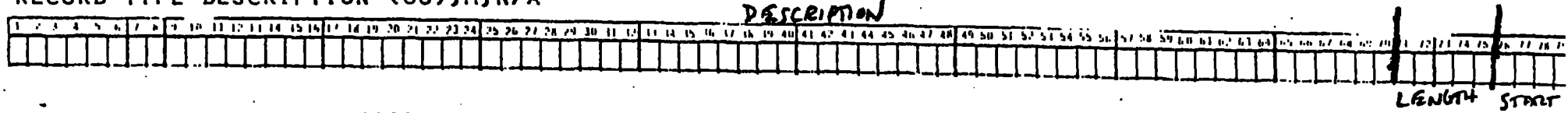
~~1-A~~
12 D

FILE NAME: Chevron Wave Data DATE: 3/17/86 RECORD:

488 FILE RECORD LINK (3),M,N/A

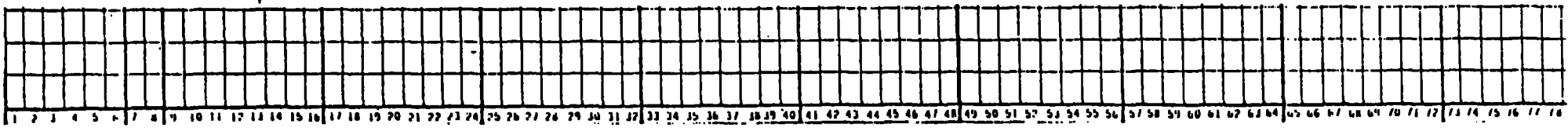
489 RECORD LENGTH (5),M,N/A (maximum)

490 RECORD TYPE DESCRIPTION (80),M,N/A



491 END OF DATA INDICATOR (10),O,N/A

492 RECORD REMARKS optional



DATA ELEMENTS ASSOCIATED WITH THIS RECORD:

12/30/85

131

ILE NAME: Chevron Wave Data DATE: 3/17/86 RECORD: _____

DATA ELEMENT: _____

501 DATA ELEMENT TAG (7),M,O

502 UNITS CODE (35),M,O

503 ELEMENT ALIAS (60),O,O — ALIAS NAMES IN THE FILE — NODC PARAMETER CODE

504 ELEMENT START POSITION (5),M,N/A

505 DATA ELEMENT LENGTH (4),M,N/A

509 START BIT (8) (BINARY FILES ONLY)

506 ELEMENT REPEAT FACTOR (5),M,N/A

507 COBOL PIC FORMAT (40),M,N/A

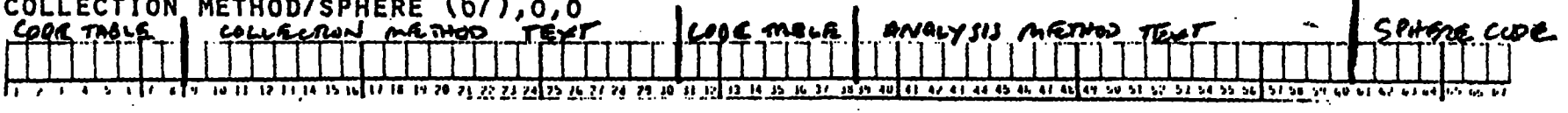
508 FORTRAN FORMAT (10),M,N/A

511 MISSING DATA INDICATOR (10),O,N/A

512 DISTINCT VALUES (5),O,N/A

513 COLLECTION METHOD/SPHERE (67),O,O

CODE TABLE | COLLECTION METHOD TEXT | CODE TABLE | ANALYSIS METHOD TEXT | SPHERE CODE



12/30/85

14D

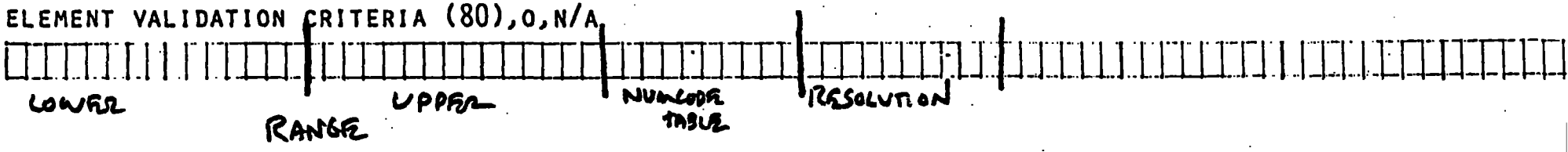
FILE NAME: Chevron Wave Data DATE: 3/17/86 RECORD:

DATA ELEMENT:

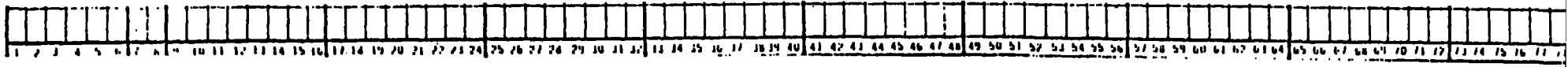
514 DATA ELEMENT TYPE (10),M,O

516 PERSON RESPONSIBLE FOR ELEMENT DESCRIPTION (20),O,N/A

517 ELEMENT VALIDATION CRITERIA (80),O,N/A



518 ORGANIZATION RESPONSIBLE FOR ELEMENT VALIDATION (80),O,N/A



12/30/85

NEW DATA ELEMENT:_____ DATE:_____

601 DATA ELEMENT NAME (80),M,O

602 COBOL NAME (30),M,N/A

603 FORTRAN NAME (6),M,N/A

604 DATA ELEMENT TAG (7),M,N/A _____ (SYSTEM GENERATED)

701 ELEMENT DEFINITION (80X?),M,O — NODE PARAMETER CODE

711 DATA ELEMENT REMARKS (80X?),O,O — NODE PARAMETER CODE — ALIAS NAMES

CHEVRON OIL FIELD RESEARCH COMPANY
A STANDARD OIL COMPANY OF CALIFORNIA SUBSIDIARY
LA HABRA LABORATORY P.O. BOX 446 LA HABRA CALIFORNIA 90631

August 29, 1969

Dr. Thomas S. Austin, Director
National Oceanographic Data Center
Washington Naval Yard, Building 160
Washington, D. C. 20390

Dear Dr. Austin:

This is in further response to our exchange of correspondence regarding deposit of wave force data at the National Oceanographic Data Center.

We are sending under separate cover an additional partial shipment of the wave data as described and agreed upon in our prior correspondence. The present shipment is the last one contemplated and completes the deposit of wave force data which we had planned. The present shipment consists of the following items:

1. Six rolls of 16 mm microfilm giving oscillograph records of wave height and wave force data as originally recorded.

2. One 2400-foot reel of magnetic tape containing reduced data in digital form of wave data files.

3. Six reports on Wave Project I. These reports describe in detail the experimental program which we have termed Wave Project I.

4. A revised Wave Project II Users' Guide. This is identical in every respect with the single copy of the Wave Project II Users' Guide which we forwarded to you under date of June 3, 1969, except that page 38 has been revised. We suggest that you destroy the original Wave Project II Users' Guide containing the incorrect page 38.

Please do not hesitate to call on us if we can be of assistance in any questions which may arise concerning the information we have sent to you.

Yours very truly,

J. B. Justus, Vice President
Production Research Department

cc: Mr. R. F. Faull

Reports, microfilm, and tape sent Registered Mail.

DO NOT DETACH BASIC DOCUMENTS OR ENCLOSURES
BY RECORDS SECTION WHEN CHANGING ACTION CODE

ROUTING SHEET - RECORD MATERIAL
IDW - NAVOCEANO - 5211/1 (Rev. 12-65)

H. O. FILE NO.

ORIGINATOR

H. O. ROUTE SHEET NUMBER

SERIAL NUMBER	DATE	ENCLOSURES	RECEIPT DATE

SUBJECT

ACTION DUE IN RECORDS

ROUTE TO CODE	PURPOSE	DATE IN	DATE OUT	INITIALS
2100				
		9/8/69		
240				
2210				WHF

REMARKS
(Show initials, extension and code)

Phoncon on 9/8/69 w/ Mr. Aagaard (213 - 691-2241) of Chevron.

"Told him we would release announcement in Nov. N/L re: availability of wave-data; He said all these data could be ~~to~~ made available ~~to~~ anyone., i.e. none of it is any longer restricted. Told him we would send a copy of trans. ~~to~~ Mr. Justus as we release the data" (WHF)

All data (copies) are located in 2210, who will handle servicing of requests. Data base files sent to records (acq nr. 69-0632) & archives (originals).

ANSWERED BY (Serial number & date)	A INTERNAL ACTION	A - R REPLY REQUIRED	I INFORMATION	S SIGNATURE

GPO 931-183

CHEVRON OIL FIELD RESEARCH COMPANY
A STANDARD OIL COMPANY OF CALIFORNIA SUBSIDIARY
LA HABRA LABORATORY P.O. BOX 446 LA HABRA CALIFORNIA 90631

J. B. JUSTUS
VICE PRESIDENT
PRODUCTION RESEARCH
DEPARTMENT

June 3, 1969

Dr. Thomas S. Austin, Director
National Oceanographic Data Center
Washington Naval Yard, Building 160
Washington, D. C. 20390

Dear Dr. Austin:

This is in further response to our exchange of correspondence regarding deposit of wave force data at the National Oceanographic Data Center and, in particular, with respect to Mr. Faull's letter of March 14, 1969, and your reply of April 1, 1969.

We are sending under separate cover a partial shipment of the wave data as described and agreed upon in the subject correspondence. The present shipment consists of the following items:

I. One 2400 foot reel magnetic tape, labeled NODCDA.

II. Three reels microfilm.

III. Six reports (1 each)

1. The Clamp-On Wave Force Meter, L. Skjelbreia.
2. Design, Construction, and Installation of Instrumentation for Wave Project II, V. Schoettle
3. Operation of Wave Project II, Progress Report No. 3, V. Schoettle.
4. Operation of Wave Project II, Progress Report No. 4, V. Schoettle.
5. Operation of Wave Project II, Final Progress Report, V. Schoettle.
6. Wave Project II Data Users' Guide, L. S. Blank.

material received &
placed in 2110 - 6/11/69

We were pleased to receive your very nice letter of April 1 and hope that the information currently being shipped and that which is to follow will turn out to be a valuable addition to the National Oceanographic Data Center. If you have any questions you would wish to discuss by phone, may I suggest you call Mr. P. M. Aagaard at La Habra (213 - 691-2241); letters should be addressed to me at La Habra rather than Mr. Faull with whom you have previously corresponded.

Very truly yours,

J B Justus

cc: Mr. R. F. Faull

CORRECTIONS TO "WAVE PROJECT I DATA USERS' GUIDE"
by L. S. Blank, August 25, 1969

1. The statement on Page 1,

   "The complete installation has been described in detail by Schurman[1], and Thrasher and Aagaard[2]. A plan view is shown in Figure 1."

   should read as follows:

   "The complete installation has been described in detail by Schurman[1], Thrasher and Aagaard[2], and the reports listed in Appendix B. A plan view for data taken after August 1956 is shown in Figure 1. This figure applies to all the digitized data. Refer to Thrasher and Aagaard[2] for the plan view before August 1956."

2. Replace Figure 1 on Page 1 with the Figure 1 in the Errata.

3. The section "Correction for Staff-Dynamometer Separation Distance" on Page 18 should be replaced by the following:

   "Correction For Staff-Force Piling Separation Distance.

   "Two problems are inherent in the use of force data that is recorded at a location that is different from the location that the wave profile is measured. First, there is a time lag, Δt, between the wave profile and the force records that is a function of the separation distance and wave direction. Secondly, the shape of the wave changes as it propagates and is not necessarily the same along each section of the crest line; this implies that the time variation of the wave profile at the force piling location is not necessarily the same as at the staff location. These problems were taken into account when digitizing the data.

   "The time lag for a given wave and force piling was calculated in the following manner. The time at which each of the out-of-water force dynamometers was first activated was determined. The height of the water-surface elevation at each of those times is equal to the height of the bottom of the corresponding dynamometer measured from the mudline. The distance to the bottom of each dynamometer was transferred to the wave profile by utilizing the wave-staff calibration steps that appear at the beginning of each record (see Figure 10) and the times were noted. The average difference between the times noted on the staff profile and those corresponding to dynamometer activation over all the out-of-water dynamometers was taken as the time lag, Δt.

"The amount of time lag by which each force data file has to be adjusted is located in Columns 49-54 of Card 1. This value is given in inches and can be converted to seconds by

$$\Delta t \text{ (sec)} = 4.0\Delta t \text{ (inches)} \qquad (4)$$

"A forward or backward shift is indicated by the sign of Δt. If $\Delta t > 0$, the wave staff was struck first, while $\Delta t < 0$ implies that the force piling was struck first. Consequently, the times in inches for the force data must be adjusted as follows:

$$TIME(J) = TIME(J) - \Delta t.$$

"The change in wave shape was accounted for in the following manner. In certain cases, for a given wave and force piling, the Δt varied according to the dynamometer that was used. This implies that the time variation of the wave profile at the force piling differed from that at the wave staff. In such cases, an 'effective' wave profile at the force piling was reconstructed by transferring the wave profile developed from dynamometer activation times onto the measured staff wave profile using the time lag (average Δt) to align the two profiles and then sketching in a new wave profile that passed through the points defined by the dynamometer activation times.

"The digitized data correspond to 'effective' wave profiles. The user should refer to the original data on microfilm for modifications made to the staff wave profiles."

4. The following corrections should be made to the Data File Numbers listed in Table I:

"21080152" should read "21080154"

"21087193" should read "21087192"

"21515133" should read "21515113"

ERRORS IN THE DIGITIZED WAVE PROJECT I DATA

The following error exists for the digitized data included in Data File 21067022:

YBAR is set equal to YC. This causes an overflow in calculating V(I), as defined by equation (3). Refer to original data on microfilm and the reports listed in Appendix B of the Guide for corrections.

ERRORS IN THE DIGITIZED WP II DATA.
Reference: "Wave Project II Users' Guide"
by L. S. Blank, May 23, 1969.

1. The Continuous Section 06886-1/01 has the following error:

   The last values of file 1/08 and first values of 1/09 have the same time values. Refer to data on microfilm for necessary corrections.

2. The Continuous Section 06886-2/01, file 2/16, has the following errors in the wave profile data:

   a. Time values for time indices I = 18 and 19 are the same.

   b. Time value jumps from 89 to 188 in going from the time index 19 to 20.

   c. REF(I) is zero and ETA(I) is too large at I = 19.

   Refer to data on microfilm for necessary corrections.

Attach: Figure 1

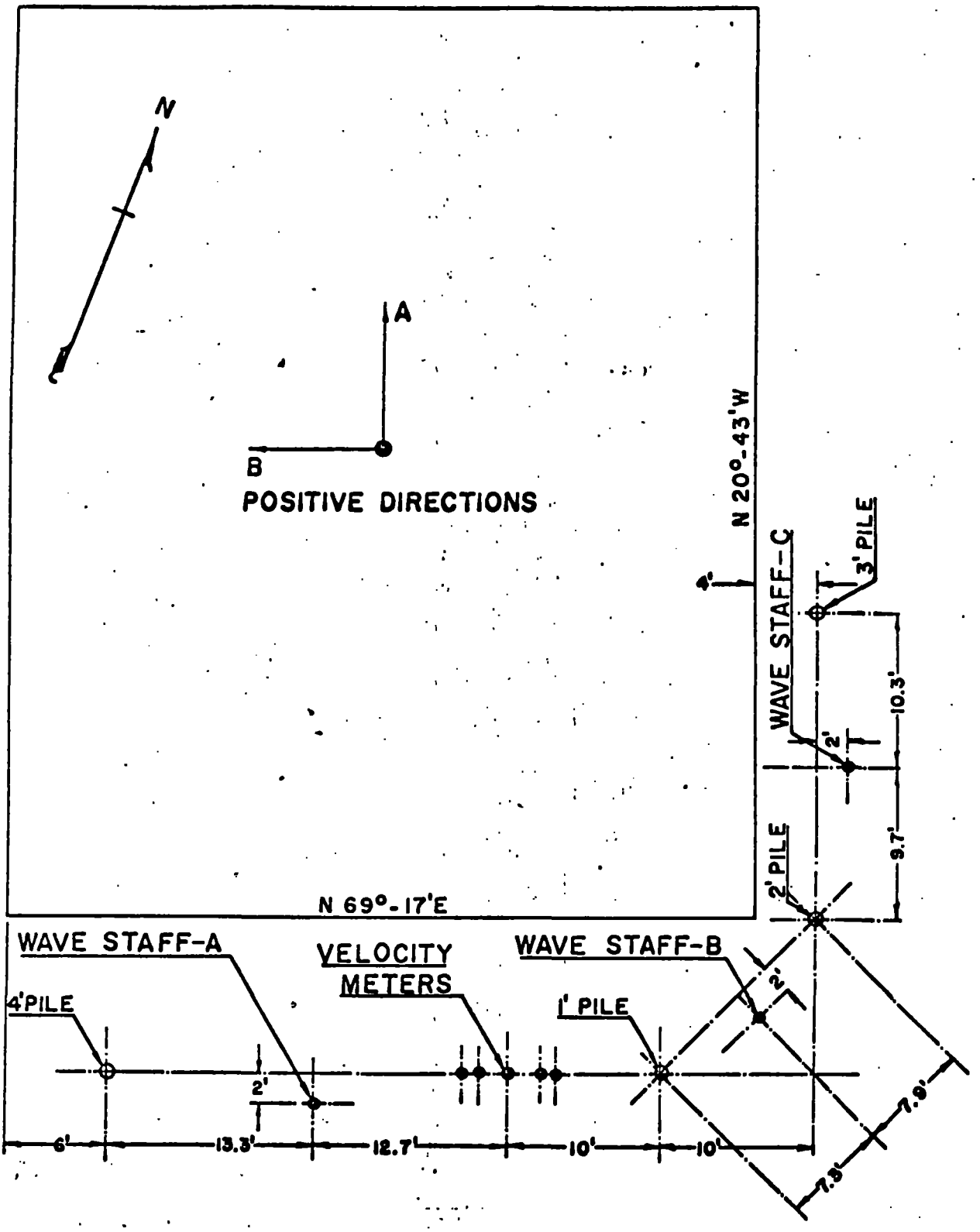


FIGURE 1
PLAN VIEW OF TEST UNITS (AFTER AUGUST 1956)

SCALE: 1/10" = 1"

CALIFORNIA RESEARCH CORPORATION OIL FIELD RESEARCH LA HABRA LABORATORY		
DRAWN: D B	DATE: 10-29-57	LE 30-399
ENG'R: L S	PROJ: 5112	

NOAA FORM 47-38 (8-77)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

COMPUTER SERVICES REQUEST

DUE DATE REQUESTED: ROUTINE RUSH

ACCOUNT NUMBER

FOR D763 USE ONLY
JOB: NUMBER 249; LEADER G/R
DATE: RECEIVED 2/24; DUE 3/10; COMPLETED 3/10

NAME OF DATA REQUESTER: Pat Kirk	ENVELOPE NUMBER	ORGANIZATION CODE
ORGANIZATION OF DATA REQUESTER: Mobile Oil	NODC COORDINATOR: Kirk	TASK NUMBER

SOURCE DATA TYPE

INPUT (*Circle appropriate*)	OUTPUT (*Circle appropriate*)
SD1 SD2 MBT XBT STD BD BI SCUDS	SD1 SD2 MBT XBT STD BD BI SCUDS
GAS: TYPE ______	GAS: TYPE ______
OTHER ______	SUMMARY: TYPE ______ OTHER ______

JOB STATISTICS

CPU	MOUNTS
ELAPSED	LINES

REQUESTED INPUT/OUTPUT MEDIUM

LIST	TAPE INPUT	TAPE OUTPUT	PLOT 925/1036	PLOT 780/763
PRINT: COMPLETE SAMPLE PUB	TRACK 7	TRACK 9	TYPE	PROGRAM NAME
PAPER: STANDARD PUB	LABEL TYPE NL	LABEL TYPE NL	TITLE	
COPIES: 1 2 3 4 5	FORMAT TYPE PB	FORMAT TYPE PB	PAPER: TRANSLUCENT RAG	INK: BLACK
CARD	RECORD SIZE 80	RECORD SIZE 80	OTHER ______	OTHER ______
DISK			PEN: BALL/INK	GRAPH SIZE
SPACE (TRACKS)	BLOCK SIZE 1600	BLOCK SIZE 4800	XXFINE XFINE FINE OTHER ______	
FORMAT TYPE	DENSITY 556	DENSITY 1600	LAND DRAWN? YES NO	PROJECTION: MERCATOR MILLER
RECORD SIZE	PARITY (7 TRK)	PARITY (7 TRK)	DATA POINTS CONNECTED? YES NO	GRID INCREMENT 10 5 2 1 DG
BLOCK SIZE	MODE (7 TRK) BCD	MODE (7 TRK) ASCII	DLAT1	DLAT2
OUTPUT DATASET NAME (DISK/TAPE): CHEVRON DATA I + 2			DLON1	DLON2

SOURCE DATA IDENTIFICATION

SELECTION CRITERIA (OA; WMO CSQ MSQ; 5DG 2DG 1DG; CRUISE)	NUMBER OF STATIONS	DATA LOCATION: FILE NAME	DATA LOCATION: TAPE NUMBER	SPECIAL INSTRUCTIONS
~~WØ 3920~~ ~~WØ 4070~~ Swirls(?) TJEH				Copy Tape Changing Specs. 2 Tapes

PAGE ____ OF ____