## POTOMAC RIVER FISHERIES COMMISSION November 20, 1970 Colonial Beach, Virginia

PRESENT - MEMBERS:

Commissioners J. Clifford Hutt, Richard E. Lankford, Lawrence O. Hayden, Milton T. Hickman, William P. Hunt. (Absent Mr. Roy E. Julie, Jr.)

OFFICERS:

Robert M. Norris, Jr., Executive Secretary;

K. Thomas Everngam, Legal Officer.

VISITORS:

Messrs. Charles R. Bagnell, Repletion Officer and E. Ralph Dameron, Supervisor, Marine REsources Commission of Virginia; Lt. Paul C. WEntzell, of Maryland Marine Police; Robert J. Rubleman, Gordon P. Hallock and Frank L. Hamons, of Fish and Wildlife Administration of Maryland; Miss Isobel Gough, Mrs. Jackie Shinn, Samuel Sullivan, Horton P. Bidrne and John Frye, Press Members; Sam Bailey, Sr., M. M. Cook, James V. Clements, William E. Newton, James E. Clements, Louis M. Thompson, Jr., Sam Bailey, Jr., John F. Brown, Jr., James T. Russell, Robert M. Rollins, James S. Lathroum, Billy Morris, George L. Beitzell, Bobby Pilkerton, Joseph A. Thompson, Sr., Herman W. Dixon, James W. Dutton, Joan L. Bowling, Joseph T. Russell.

Mr. Hutt, Chairman, called the meeting to order at 9:45 a.m. (EST). A motion was offered and seconded that the Minutes of the meeting held September 18, 1970, copies of which had been previously mailed to each Commissioner, be approved. Motion was approved.

After explaining reasons for such action, Mr. Hutt directed that approval by telephone poll of each Commissioner for an extension of time of two weeks from and including November 2nd through 4th, and 9th through 11th, for soft shell clamming in the area between Cuckolds Creek and Swan Point, be noted in these Minutes. Mr. Hutt reported that the harvest of clams from this area was 9065 bushels of clams, representing 398 boat days harvest effort, amounting to a dockside value of \$52,123.75 for the seven (three day) weeks the area was open. Lt. Wentzell said that the Maryland Marine Police inspectors, who were constantly in the clamming area when clamming operations were taking place, reported that no oysters were seen and that no violations of the PRFC Regulations occurred. Mr. Hutt said that one telephone report of heavy deposits of dead clams washing up on shore in the Cuckolds Creek area, following a heavy wind, had been received from Mr. Samuel Bowling, Secretary of the Charles County Watermen's Association, and that he, Lt. Wentzell, Robert M. Norris, Jr. and Virginia Inspector W. H. Webb had met on the shore the following morning and had personally checked out the report in the presence of Mr. Bowling and several other persons from Charles County, but could find only one bushel, or less, of either live or dead clams. He also noted that a letter of complaint about the clamming operation was received from Judge Roscoe Parker, in that the clamming boats had worked too close inshore, but that this was not supported by the logs of the Inspectors, who had constantly supervised the operation. However, he added that any future operations of this type should have the inshore line of the area more fully marked with buoys than was done near Cuckolds Creek. Mr. Hutt praised the clammers for their cooperation in observing the regulations and ground rules, and the Maryland Marine Police for their constant patrol in this area. Mr. Gordon Hallock, of the clam promotion department of Maryland, supported Mr. Hutt's remarks and also thanked the PRFC for their action in making this area available for harvesting this resource; he emphasized that new areas for clamming are needed.

Mr. Hickman complimented the Chairman, Legal Officer, Marine Police, and Executive Secretary for the prompt and successful action in investigating and responding to an ycomplaints.

Mr. Norris reported that letters of warning of non-compliance with PRFC Regulations had been sent to owners of several stands of stake gill net poles reported at last meeting as remaining in the river beyond the maximum time allowed following discontinuing fishing, and that the owners had been requested to remove said poles. He said that several had complied with request and the remainder still had several days in which to remove the stakes according to the terms of the notices.

Mr. Norris said that, through a telephone call, he had determined that in reply to a recent letter sent the U. S. Corps of Engineers that a public hearing would be announced for December 1970 on application of Potomac Sand and Gravel Company for a permit to dredge sand and gravel in the Potomac River between Sycamore and Hallowing Points. Our letter had requested the Corps, that if the permit is issued, that Potomac Sand and Gravel Company's dredging operations be prohibited during the months of April and May of each year to protect this spawning

area for shad and striped bass. The Commission requested that in case of such a hearing that our scientific advisors be asked to be present and represent the interests of the Commission in this matter.

The Executive Secretary reported that the renewal, as of 10-8-70, of our "Monies and Securities" policy (\$2500 inside or outside of premises) now includes a \$100 deductible clause and that the annual premium rate has been increased by \$25 to a total of \$116.00.

A report was distributed indicating the total harvest of oysters from 10-1-70 through 11-13-70 to be 101,933 bushels, a decrease of 87,875 bushels from same period last year. The report indicated little difference in number of tonging and buying licenses issued compared to last year; however, the statistics on number of boats and men working in the river for the above period indicates that many of the licensees are working in other areas of Maryland and Virginia due to increased populations of oysters in other areas.

A statement of funds on hand and in banks was read by Mr. Hutt showing a total of \$245,602.80, as of November 18, 1970. He said that the substantial part of these funds are budgeted for repletion efforts in spring of 1971 and are currently invested in interest bearing accounts.

A motion was offered and seconded approving itemized disbursements for month of September 1970 totaling \$4,648.80 and for October 1970 totaling \$5,452.15. Motion was approved.

Mr. Norris said that a small seed oyster planting operation was in progress and to date 3,548 bushels had been planted on a ten acre plot in the 1967 Hog Island shell planting. These 1970 seed struck on shells in 1/2 bushel wire bags and come from the Great Wicomico River in Virginia. An estimated 7000-8000 bushels will be the total purchased and planted.

The joint report of the Maryland-Virginia Auditors for the fiscal year July 1, 1969 through June 30, 1970 was presented, and it was noted that no criticisms were included. A motion was offered, seconded and approved acknowledging and accepting this report.

A proposal for opening a second soft shell clamming area opposite Cobb Island was presented by Mr. Frank L. Hamons, of the Maryland and Fish and Wildlife Administration. He said a recent survey shows an estimated harvestable population of clams of at least 100 bushels per acre on an area encompassing 327 acres, and that the area does not contain any harvestable population of oysters; that only in a few isolated spots do oysters occur, and the most anywhere in this area amount to 2.7 bushels per acre. A full discussion of this proposal ensued with visitors, as well as others, offering comments, suggestions, and recommendations with some for and some against opening this area.

At 11:18 a.m. the Commission recessed to convene in executive session. Mr. Hutt invited all persons to remain and return to the open session to follow. The executive session opened at 11:28 a.m. After discussion of proposed clamming area, a motion was offered and seconded as follows:

"That the proposed area be opened for soft shell clamming by hydraulic dredging for a period of five (5) weeks, four (4) days each week Monday through Thursday starting November 30, 1970 and ending Thursday, December 31, 1970 during the hours 8:00 a.m. to 1:00 p.m., and that there be no extension of this time after or following 12-31-70; that a straight inshore line of area, as proposed by Mr. Hamons, be moved further offshore to be at least 900 feet from Cobb Island shore at all points; that the lower end be moved up river a distance of 600 feet above Mr. Hamons' suggested line, and that the inside line be well marked with buoys, and that the corners, end lines and outside line also be adequately marked with buoys; that the Maryland Marine Police officers monitor the area at all times that it is open for clamming; if circumstances dicate, and by telephone poll the Chairman determines that the Commission is agreeable, that Fridays within the above specified period may be added as working days for clamming." The motion was unanimously approved.

A motion was offered, seconded and unanimously approved that a copy of Mr. Hamons' report and recommendation be made a part of these Minutes by being attached hereto.

At 12:15 p.m. the executive session was adjourned, the meeting was reconvened, and Press Members and visitors were invited to return to the meeting. Mr. Hutt outlined to the group in full detail the results and particulars of the decision.

The Commission set the next meeting for Friday, January 22, 1971 at 9:30 a.m. (EST) at Colonial Beach, Virginia.

At 12:30 p.m. the meeting was adjourned.

Clifford Hutt, Chairman

Richard E. Lankford, Secretary

NOTES; (1) Hinus Sign (-) should be read as "Less Than"
(2) (X) through Bu/Acre columns indicates Blank Sample.
(3) (--) through Bu/Acre columns indicates Incomplete Sample.
Station

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Station No.

Depth

Date Taken

Clams
(bu/Acre)
Harket-Submarket-Total

Oysters (bu/Acre)
Market-submarket-total

Type of Bottom

Debris

Quantity % Clam(Mya)

buried

cinder

General Remarks

BLANK SHELL

Charles County
Potomac River, Cobb Island
June - July

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|          | 5.01          | 5.01                     | 5,0                 | 4.51         | 4,51             | 4,51             | 4.0"                                       | 5<br>5<br>7      | 5                  | 5,5                 | 5,51                                   | 4.09                    | 4.0.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Si .                                    | 0,0                                          |                                                |
| Ī        | 6/4/70        | 6/4/70                   | 6/4/70              | 6/4/70       | 6/4/70           | 6/4/70           | 6/4/70                                     | 6/4/70           | 6/4/70             | 6/4/70              | 6/4/70                                 | 6/4/70                  | 6/4/70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6/4/70                                  | 6/4/70                                       |                                                |
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|          | 158+          | 319+                     | 281                 | +36+         | 152+             | 15               | ı                                          | <b>-</b> 15      | -15                | -15                 | -15                                    | -15                     | 73+                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ×                                       | -15                                          | like sto                                       |
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|          | Hard, Sand on | Hard Clay                | Hard, Sand on clay  | Hard Clay    | Hard Clay        | Hard Clay        | Herd Cley                                  | Hard Clay        | Hard, Sand on clay | Hard, Sand on clay. | Hard, Sand on clay                     | Medium, Sand<br>on clay | Hard, Sand on clay                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Hard, Sand on clay                      | Hard, Sand on clay                           |                                                |
|          | Gravel        | None                     | Stone,<br>Gravel    | None         | Stone,<br>Gravel | Stone,<br>gravel | Hone                                       | None             | None               | None                | None                                   | None                    | Stone,<br>Gravel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | None                                    | None                                         | 1                                              |
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|          | (H)<br>(O)    | (E)<br>(O)               | (11)                | <b>E</b> ©   | (H)              | £6               | <b>E0</b>                                  | <b>E</b> O       | E 0                | (H)(O)              | E)()                                   | E)()                    | (E)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (H)                                     | <b>E</b> 0                                   | × v                                            |
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|   | 7.01                    | 7.0"                        | 7.01              | 7.01              | 7.51             | 5.0"           | 4.0               | 4.01             | 4.0'             | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | 5.0°             | 8.0                     | 5,51                          | 5.0*               | ٥.<br>٥                                 | 5.00             | Depth                                        | =) should<br>Su/Acro (<br>th Bu/Acro                                                                                                             |
| - | 6/11/70                 | 6/11/70                     | 6/11/70           | 6/11/70           | 6/11/70          | 6/11/70        | 6/11/70           | 6/11/70          | 6/11/70          | 6/11/70                                | 6/11/70          | 6/4/70                  | 6/4/70                        | 6/4/70             | 6/4/70                                  | 6/4/70           | Date<br>Taken                                | Hirus Sign (-) should be read as "Less Than" (K) through Bu/Acre columns indicates Blank Sample. () through Bu/Acre columns indicates incomplete |
|   | 407                     | 174                         | 247               | 537               | -15              | -15            | 22                | 29               | 73               | 58                                     | 9                | -15                     | 203                           | <b>≟</b> 15        | 44                                      | 160              | Market-                                      | "Less Th                                                                                                                                         |
|   | -15                     | Ļ                           | 29                | 174               | 0                | 0              | <u>-</u> 35       | -15              | 0                | -15                                    | 0                | 0                       | 37                            | -15                | -15                                     | 29               | Class<br>(bu/Acre)<br>Harket-Submarket-Total | an"<br>nk Sample<br>ncomplete                                                                                                                    |
|   | 407+                    | 174+                        | 276               | 711               | 125              | <u>L</u> 15    | 222+              | 29+              | 73               | 58+                                    | 36               | 15                      | 240                           | <b>-15</b>         | 444                                     | 189              | -Total                                       | Sample.                                                                                                                                          |
|   | 0                       | 0                           | 0                 | -15               | 0                | 0              | 0                 | 0                | 0                | 0                                      | 0                | 0                       | 0                             | 0                  | 0                                       | 0                | Parket                                       | ·                                                                                                                                                |
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|   | 0                       | 0                           | 0                 | -15               | 0                | 0              | 0                 | 0                | 0                | 0                                      | 0                | 0                       | 0                             | 0                  | 0                                       | 0                | t-total                                      | Poton                                                                                                                                            |
|   | Hard Sand on clay       | Hard Clay                   | Hard Sand on clay | Hard Sand on clay | Medium, Sand     | Hard Sand      | Herd Send         | Hard Sand        | Hard Sand        | Hard Sand                              | Hard Send        | Hedium, Sand<br>on clay | Hard Sand                     | Hard Sand          | Medium Sand                             | Hard Sand        | Type of Bottom                               | Potomac River, Cobb Island<br>June - July                                                                                                        |
|   | Stone,                  | Stone,<br>Bravel            | Stone,            | Stone,<br>Gravel  | Stone,<br>Eravel | Gravel<br>few  | None              | Stone,<br>gravel | Stone,<br>Bravel | Gravel                                 | Gravel<br>few    | Gravel<br>few           | Gravel                        | Gravel             | Gravel<br>few                           | Stone,<br>Gravel | Debris                                       | sland                                                                                                                                            |
|   | 77<br>00<br>12          | F 8                         | Few               | Few               | Few              | Few            | Feu-              | Few              | S B A            | Few                                    | Fow              | Few                     | Noderate                      | Abundant           | Moderate                                | т<br>Ф           | Quanti                                       |                                                                                                                                                  |
|   | 0 (0)                   | 100 (N)                     | (H)<br>0 (O)      | 98 (M)            | (H) 001          | 5 (0)<br>5 (0) | (n)<br>(0)<br>(0) | (n)<br>0 (o)     | 0 (N)<br>0 (O)   | 100 (N)<br>0 (O)                       | 100 (H)<br>0 (O) | (H) 001<br>(O) 0        | 20 (N)                        | 1t 95 (0)<br>5 (M) | 40 (N)                                  | 50 (n)<br>50 (n) | % Clam(Wya)                                  | BLANK SH                                                                                                                                         |
| - | 1 1                     | 1 1                         | 1 1               | 100               | 1 1              | 100            | 1 1               | 1 1              | 8 8              | 1 1                                    |                  | 1 1                     | 90                            | 70                 | 100                                     | 100              | buried                                       | TIBHS                                                                                                                                            |
|   | 1 1                     | 1 1                         | 1 1               | 10                | 1 1              | 10             | 1 1               | 1.1              | ΕŢ               | 1.1                                    | 1.1              | 1 1                     | 10                            | 10                 | 10                                      | 10               | cindor                                       |                                                                                                                                                  |
|   | Missed unknown quantity | Hissed unknown quantity Mya | unknown           | Missed 40% Myo    |                  |                |                   |                  |                  |                                        |                  | Few Rangia              | Missed 50% Mya in heavy shell | Few Rangia         | Few Rangia                              |                  | Gonoral<br>Remarks                           | 13                                                                                                                                               |

Potomac River, Cobb Island June - July

BLANK SHELL

|               | 4                              |                                  | n                                 | A                 |            |           |           |                                     | <u> </u>                |                         |                                         | . /               |                   | 5 36 =                       | ar to N.O.B.                                       | emple Area        | en prop                                        |
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| 14 + 3<br>170 | SS                             | 24                               | 55                                | <u>5</u>          | N          | 23        | 24        | 23                                  | 25                      | 27                      | 20                                      | 29                | 30                | ħ                            | UI<br>IU                                           | 67.               | Station<br>No.                                 |
|               | 8.51                           | 6.0"                             | 6.01                              | 10.04             | 10.09      | 10.00     | 10.01     | 9.0*                                | 8.08                    | 8.01                    | 7.01                                    | 7.01              | 7.0*              | 8,01                         | 7.0"                                               | 7.01              | Depth                                          |
| 1             | = 7/1/70                       | 7/1/70                           | 7/1/70                            | 6/4/70            | 6/4/70     | 6/4/70    | 6/4/70    | 6/4/70                              | 6/4/70                  | 6/4/70                  | 6/4/70                                  | 6/4/70            | 6/4/70            | 6/11/70                      | 6/11/70                                            | 6/11/70           | Date<br>Tekon                                  |
|               | 15                             | 44                               | 73                                | 0                 | ×          | ×         | -15       | 73                                  | 102                     | 87                      | 73                                      | 145               | 145               | 29                           | 116                                                | 334               | llarke t                                       |
|               | -15                            | <b>~15</b>                       | 115                               | -15               | ×          | ×         | -15       | 145                                 | 75<br>25<br>25          | 131                     | 109                                     | -25               | -15               | ‡<br>Vī                      | \ <u>7</u>                                         | 15                | Clens<br>(bu/Acre)<br>Market-Submarket-Total   |
|               | 15+                            | + 4 4                            | 75+                               | -15               | ×          | ×         | -15       | 218                                 | 254                     | 218                     | N<br>8<br>13                            | 145+              | 145+              | 29                           | 131                                                | 334+              | t-Total                                        |
|               | 0                              | 0                                | 0                                 | 0                 | ×          | ×         | 0         | 0                                   | 0                       | 0                       | 0                                       | 0                 | 0                 | 0                            | 0                                                  | 0                 | Market-                                        |
|               | 0                              | 0                                | 0                                 | 0                 | ×          | ×         | 0         | 0                                   | 0                       | 0                       | 0                                       | 0                 | 0                 | 0                            | -15                                                | 0                 | Oysters<br>(bu/Acre)<br>Market-submarket-total |
|               | 0                              | 0                                | 0                                 | 0                 | ×          | ×         | 0         | 0                                   | 0                       | 0                       | 0                                       | 0                 | 0                 | 0                            | -15                                                | 0                 | total                                          |
| 1             | Hard Sand                      | Hard Sand                        | Hard Sand                         | Hard Sand on clay | Hard Sand  | Herd Sand | Hard Sand | Hard Sand on clay                   | Hard Sand on clay       | Hard Sand on clay       | Hard Sand on clay                       | Hard Sand on clay | Hard Sand on clay | Hard Sand on clay            | Hard Sand on clay                                  | Hard Sand on clay | Type of Bottom                                 |
|               | None                           | None                             | None                              | None              | None       | None      | None      | Stone,<br>Gravel                    | Stone,<br>gravel        | Stone,<br>gravel        | Stono,<br>Few                           | Stone,<br>gravel  | None              | Stone,<br>gravel<br>moderate | None                                               | Stone             | Debris                                         |
|               | Hoderate                       | 7)<br>0<br>4                     | i e                               | ሽ<br>ፀ<br>ସ       | Few        | Few<br>W  | Few       | Abundant                            | Abundant                | Abundent                | Abundant                                | Mod-<br>Abundant  | Mod-<br>Abundant  | e<br>Fe<br>8                 | FeW                                                | Tew               | Quantity                                       |
|               | 955                            | 001                              | 001                               | 955               | 000        | 00 O      | 95        | t 98                                | £ 98                    | 1 99                    | 1 99                                    | 25                | 95                | 95                           | 0 0                                                | 00                | 2696                                           |
|               | £6                             | E0                               | <b>E©</b>                         | EE                | <b>E</b> S | £6        | EO        | (E)(O)                              | E0                      | ES                      | £0                                      | <b>E©</b>         | E0                | <b>E</b> S                   | ES                                                 | 33                | Oyster<br>Clam(Uya)                            |
| 1             | 100                            | 1 1                              | 1 1                               | 100               | 1 1        | 1 1       | 100       | 100                                 | 100                     | 95                      | 90                                      | 100               | 100               | 100                          | 1                                                  | ; (               | buried                                         |
| 1             | 10                             | F t                              | 1 1                               | 10                | 1 1        | 1 1       | 10        | 10                                  | 10                      | ΙVı                     | 0 1                                     | ιο                | 10                | 10                           | 1 1                                                | t t               | cinder                                         |
|               | ma des-quie emu effendrés dels | des quis aux annies de l'Archail | gradual and desired to the second |                   |            |           |           | Missed 50-60% Mya in<br>heavy shell | Missed 50% Mya in shell | Hissed 60% Hya in shell | Hissed unknown quantity<br>Hya in shell | 1 30% Llya        | 1 20% Uya         |                              | Bottom very difficult<br>to dig in. 60% efficiency | 20                | Genoral<br>Remarks                             |

NOTES: (1) Minus Sign (-) should be read us "Less Than"
(2) (X) through Bu/Acre columns indicates Blank Sample.
(3) (--) through Bu/Acre columns indicates incomplete Sample.

Sample Area

Station No.

Dopth

Date Taken

Clams (bu/Acre) Market-Submarket-Total

Oysters (bu/Acre)

Market-submarket-total

Type of Bottom

Debris

Quantity % Clan(Nya)

buried

cinder

General Mezarks Charles County
Potomao River, Cobb Island
Juno - July

BLANK SHELL

|   | A                   | ,                   | J .         | E/<br>25            | ) Tr        | N <sub>a</sub> | 2. T                                  | ltay.                                      |             | )                                |                                         |           | Sample Area<br>Cobb Island<br>Cobb Island<br>to H.O.B. |
|---|---------------------|---------------------|-------------|---------------------|-------------|----------------|---------------------------------------|--------------------------------------------|-------------|----------------------------------|-----------------------------------------|-----------|--------------------------------------------------------|
|   |                     |                     |             |                     |             |                |                                       |                                            |             |                                  |                                         | 0.0       | ron<br>end bar                                         |
|   | 50                  | 51                  | M VI        | 64                  | 48          | 47             | 46                                    | 45                                         | 59          | 58                               | 57                                      | 56        | H<br>H                                                 |
|   | 8.5                 | 6,5                 | 6.0*        | 5.04                | 4.51        | 5.0*           | 11.0"                                 | 10.00                                      | 10.04       | 9.01                             | 8.0                                     | 8,0       |                                                        |
|   | 7/1/70              | 7/1/70              | 7/1/70      | 6/11/70             | 6/11/70     | 6/11/70        | 6/11/70                               | 6/11/70                                    | 7/1/70      | 7/1/70                           | 7/1/70                                  | 7/1/70    |                                                        |
|   | 73                  | 65                  | 36          | 87                  | 102         | 27             | ×                                     | ×                                          | 145         | 87                               | 15                                      | 102       |                                                        |
|   | +15                 | -15                 | -15         | -15                 | -15         | -15            | ×                                     | ×                                          | 73          | 58                               | 102                                     | 125       |                                                        |
|   | 73+                 | 65+                 | 90          | 87+                 | 102+        | 51+            | ×                                     | ×                                          | 218         | 145                              | 117                                     | 102+      |                                                        |
|   | 0                   | 0                   | 0           | 0                   | 0           | 0              | ×                                     | ×                                          | 0           | -15                              | 0                                       | 0         |                                                        |
|   | 0                   | 0                   | 0           | 0                   | 0           | 0              | ×                                     | ×                                          | 0           | 0                                | 0                                       | 0         |                                                        |
|   | 0                   | 0                   | 0           | 0                   | 0           | 0              | ×                                     | ×                                          | 0           | -15                              | 0                                       | 0         |                                                        |
|   | Medium Sand         | Medium Sand         | Medium Sand | Medium Sand on clay | Medium Sand | Medium Sand    | Soft Sand on clay                     | Medium Clay                                | Medium Sand | Hedium Sand                      | Hard Sand                               | Soft Sand |                                                        |
|   | None                | Hone                | None        | None                | None        | Hone           | None                                  | lione                                      | None        | None                             | None                                    | None      |                                                        |
|   | Fow                 | 7<br>0<br>4         | F)          | Few                 | Fow         | #<br>@         | ₩<br>0<br>₩                           | Few                                        | Hod.        | Mod.                             | E od                                    | Few       |                                                        |
|   | 100                 | 00<br>0             | 100         | 100                 | 000         | 000            | 100                                   | 95                                         | 01<br>06    | 98                               | 100                                     | 29 B      |                                                        |
|   | (R)<br>(O)          | (E)                 | (6)         | (H)<br>(O)          | E0          | (H)<br>(O)     | (H)<br>(O)                            | (H)<br>(O)                                 | (E)         | (6)                              | (e)<br>(e)                              | £)0       |                                                        |
|   | 1 1                 | 1 1                 | 1 1         | 1 1                 | 8 1         | . 1            | 1 1                                   | 100                                        | 98          | 95                               | 95                                      | 100       |                                                        |
|   | 1.1                 | 1 1                 | 1.1         | 1 1                 | 1 1         | 1.1            | 1 \$                                  | 10                                         | 10          | 10                               | 10                                      | 10        |                                                        |
| 9 | Few Rangiay-Magelus | Few Rangia, Tagelus | Few Rangia  |                     |             |                | Very small Mya falling through dredge | Some very small Hya falling through drodgo |             | Misset 75% Mya in haavy<br>shell | Area sanded in, missed 75% Kra in shell |           |                                                        |

Hoven out Fey Front Hommond at gutte Kenny mm any 12 2

Charles County Survey Potomac River, Cobo Island August - 1970

Lick # 1 - Started at Neale Sound Light 101

1300' drag using 22" dredge

15% - Market oysters

2% - Small oysters 2% - Blank Shell Total sample 19% bu.

2.75 bu/acre market oysters .32 bu/acre small oysters

Lick # 2 121

1500' drag using 22" dredge

3% - Market oysters

0% - Small oysters

1% - Blank Shell

Total sample 4% bu.

0.48 bu/acre market oysters

Lick # 3 121

1500' drag using 22" dredge

5.5% - Market oysters

O% - Smalls 2% - Blank Shell Total sample 7.5% bu.

0.87 bu/acre market oysters

Lick # h 191 9001 drag using 22" dredge

35% - Harket oysters 0% - Small oysters

25% - Blank Shell Total sample60% bu.

Dredge filled up quickly in 191 of water.

9.25 bu/acre, inaccurate as dredge filled early. This is oyster bottom.

```
Lick # 5
```

5001 drag using 22" dradge

23% - Market oysters

0% - Small oysters
6% - Blank Shell
Total sample 29% bu.

10.95 bu/acre

## Lick # 6

1250' drag using 22" dredge

1% - Market oysters 0% - Small oysters 0% - Blank Shell Total sample 1% bu.

0.19 bu/acre

## Lick " 7

1350 drag using 22" dredge

4% - Market oysters
0% - Small oysters
0% - Blank Shell
Total sample 4% bu.

0.71 bu/acre