

Douglas Harbor  
November 2008

Core Field Log and Processing Photos: Composite 1

PROJECT/SURVEY Douglas Harbor			DATE 11/17/08	PROJECT MANAGER M. Pinza	RECORDER AS	
STATION ID PND07-01			NAV DATUM 84	LATITUDE 58° 16.513	LONGITUDE 134° 23.131	
ATTEMPT 4 of 1	TIME STARTED 3:03	TIME FINISHED 15:10	WATER DEPTH (FT) 22	TIDE (FT) 16	MLLW (FT) = WATER DEPTH - TIDE -6	
SAP DEPTH (FT) -14	SAP DEPTH - MLLW 8	TARGET CORE LENGTH (FT) 8	FINAL CORE LENGTH (FT) 10 1/2	CORE DIAMETER (IN) 4"		
START TAPE (FT) 8.5	FINISH TAPE (FT) 18 1/2	PENETRATION (FT) = FINISH - START 10.5			RECOVERY 10.5	
PEN. DEP. (FT)	RETRV. DEP. (FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1	Primarily sand	Slight Sulfur odor	Black, shell debris		Large cobble 4"
2	2					
3	3	medium coarse sand clay				
0-3 1/2"					564 4/1	
4	4	sand intermix w/ mud pack clay				
5	5					
6	6	hard pack silt/clay			564-6/1	
7	7					
8	8					
9	9					
10	10	hard pack silt/clay				10 11'

Section A  
Section B  
2 pieces  
D

NOTES  
~ 30' from end of outer A float finger



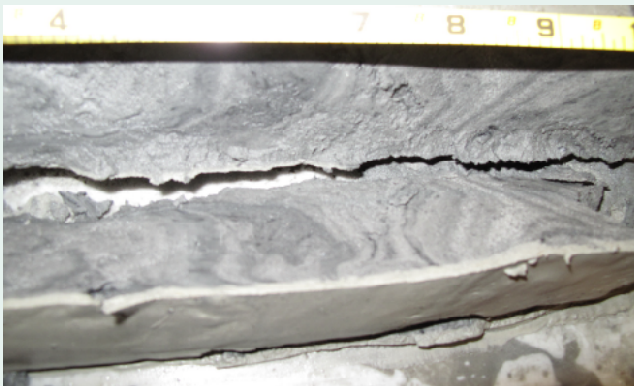
PND07-01 Sec A



PND07-01 Sec B



PND07-01 Sec C



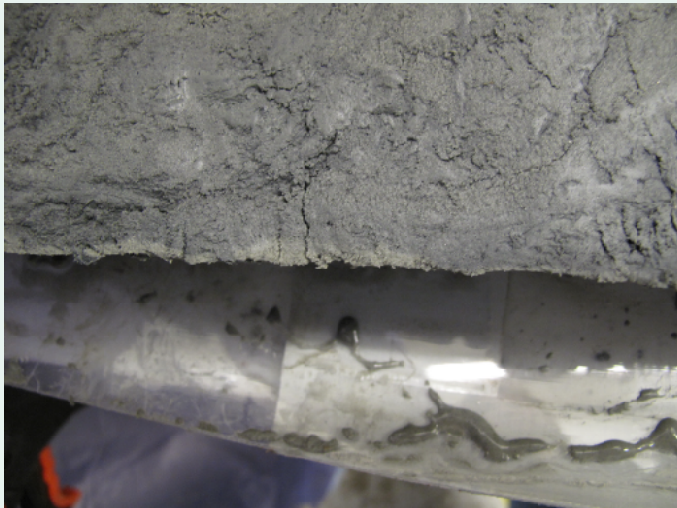
PND07-01 - Sec C close-up



PND07-01 - Two Composites



PND07-01 - Sec D



PND07-01 - Sec D Close-up



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas harbor</i>			DATE <i>11/17/08</i>	PROJECT MANAGER <i>M Pinza</i>	RECORDER <i>AS</i>	
STATION ID <i>PND07-01</i>			NAV DATUM <i>84</i>	LATITUDE <i>50° 16.500</i>	LONGITUDE <i>134.23.128</i>	
ATTEMPT <i>1 of</i>	TIME STARTED <i>2:04</i>	TIME FINISHED	WATER DEPTH (FT) <i>12</i>	TIDE (FT) <i>+15</i>	MLLW (FT) = WATER DEPTH - TIDE <i>+3</i>	
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>17 (attempting 14')</i>		TARGET CORE LENGTH (FT) <i>14</i>	FINAL CORE LENGTH (FT) <i>0</i>	CORE DIAMETER (IN) <i>4"</i>	
START TAPE (FT) <i>-4</i>	FINISH TAPE (FT)	PENETRATION (FT) = FINISH - START			RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1					
2	2					
3	3		<i>Refusal</i>			
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

**NOTES**

*refusal last tip moved the boat  
NW ish*



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas harbor</i>			DATE <i>11/17</i>		PROJECT MANAGER <i>M. Pinza</i>		RECORDER <i>AS</i>	
STATION ID <i>PND 07-C1</i>			NAV DATUM <i>84</i>		LATITUDE <i>58° 16.510</i>		LONGITUDE <i>134.2328</i>	
ATTEMPT <i>2 of</i>		TIME STARTED	TIME FINISHED	WATER DEPTH (FT) <i>19 ft</i>	TIDE (FT) <i>15</i>	MLLW (FT) = WATER DEPTH - TIDE <i>-4</i>		
SAP DEPTH (FT) <i>&gt; 14</i>		SAP DEPTH - MLLW <i>10</i>		TARGET CORE LENGTH (FT) <i>10</i>	FINAL CORE LENGTH (FT) <i>0</i>		CORE DIAMETER (IN) <i>4"</i>	
START TAPE (FT) <i>4</i>		FINISH TAPE (FT)		PENETRATION (FT) = FINISH - START			RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH		MISC	
1	1							
2	2							
3	3							
4	4		<i>Refusal</i>					
5	5							
6	6							
7	7							
8	8							
9	9							
10	10							

NOTES

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# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11-17</i>	PROJECT MANAGER <i>M Pinza</i>	RECORDER <i>AS</i>	
STATION ID <i>PN1007.01</i>			NAV DATUM <i>84</i>	LATITUDE <i>58 16.517</i>	LONGITUDE <i>134 23.129</i>	
ATTEMPT <i>3</i>	TIME STARTED <i>2:50</i>	TIME FINISHED <i>14:58</i>	WATER DEPTH (FT) <i>16</i>	TIDE (FT) <i>16</i>	MLLW (FT) = WATER DEPTH - TIDE <i>0</i>	
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>14</i>		TARGET CORE LENGTH (FT) <i>14</i>	FINAL CORE LENGTH (FT) <i>10.5</i>	CORE DIAMETER (IN) <i>4"</i>	
START TAPE (FT) <i>0</i>	FINISH TAPE (FT) <i>10.5</i>		PENETRATION (FT) = FINISH - START <i>10.5</i>		RECOVERY <i>10.5</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1					
2	2			<i>Refusal</i>		
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

*No sample collected - vibrocore likely fell on its side*



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY PND 07-01 Douglas Harbor			DATE 11/17/08	PROJECT MANAGER M. Pinza	RECORDER AS	
STATION ID PND 07-01			NAV DATUM 84	LATITUDE 58°16.511	LONGITUDE 134°23.126	
ATTEMPT 4	TIME STARTED 4:45	TIME FINISHED	WATER DEPTH (FT) 24	TIDE (FT) 15	MLLW (FT) = WATER DEPTH - TIDE -9	
SAP DEPTH (FT) -14	SAP DEPTH - MLLW 5		TARGET CORE LENGTH (FT) 5	FINAL CORE LENGTH (FT) -	CORE DIAMETER (IN) 4"	
START TAPE (FT) 8'	FINISH TAPE (FT) -	PENETRATION (FT) = FINISH - START -			RECOVERY -	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1					
2	2			Refusal		
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

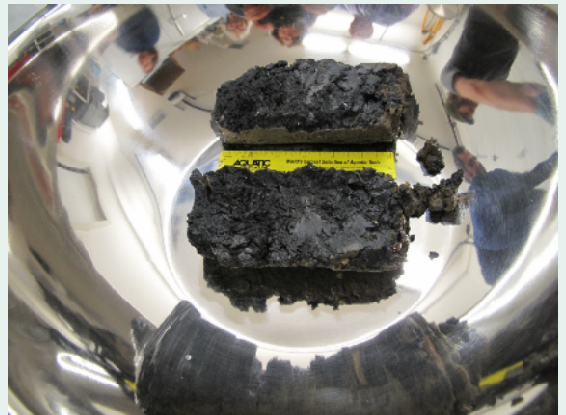
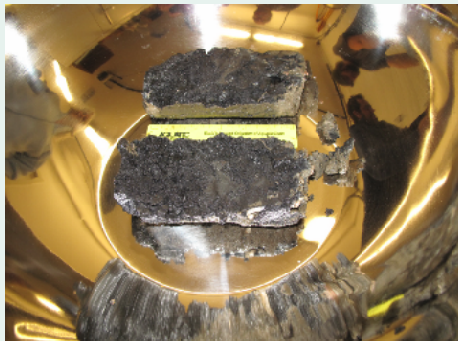
NOTES  
No good ~ ~~no~~ hitting something



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>				DATE <i>11/21/08</i>		PROJECT MANAGER <i>M. Pinza</i>		RECORDER <i>[Signature]</i>	
STATION ID <i>PND 07-02 (1)</i>				NAV DATUM <i>84</i>		LATITUDE <i>58° 16.478</i>		LONGITUDE <i>134° 23.138</i>	
ATTEMPT <i>1 of 3</i>		TIME STARTED		TIME FINISHED		WATER DEPTH (FT) <i>—</i>		TIDE (FT) <i>—</i>	
SAP DEPTH (FT) <i>—</i>		SAP DEPTH - MLLW		TARGET CORE LENGTH (FT)		FINAL CORE LENGTH (FT) <i>1.5</i>		CORE DIAMETER (IN) <i>4</i>	
START TAPE (FT)		FINISH TAPE (FT)		PENETRATION (FT) = FINISH - START <i>1.5</i>				RECOVERY <i>1.5</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)		SAMPLE ID BY DEPTH		MISC	
<i>1</i>	<i>1</i>	<i>7"</i>	<i>Slight Sulfur</i>	<i>2</i>				<i>#338 339</i>	
2	2								
3	3								
4	4								
5	5								
6	6								
7	7								
8	8								
9	9								
10	10								

NOTES  
*Sample taken at low tide by walking out on the exposed beach*  
*3 - one foot sections combined*







# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/21/08</i>	PROJECT MANAGER <i>W. Pinza</i>	RECORDER <i>[Signature]</i>	
STATION ID <i>PND07-02 (2)</i>			NAV DATUM <i>54</i>	LATITUDE <i>58°16.478</i>	LONGITUDE <i>134023.138</i>	
ATTEMPT <i>2 of 3</i>	TIME STARTED	TIME FINISHED	WATER DEPTH (FT) <i>—</i>	TIDE (FT) <i>—</i>	MLLW (FT) = WATER DEPTH - TIDE <i>+8</i>	
SAP DEPTH (FT)	SAP DEPTH - MLLW		TARGET CORE LENGTH (FT)	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN) <i>4</i>	
START TAPE (FT)	FINISH TAPE (FT)		PENETRATION (FT) = FINISH - START		RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1					
2	2					
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES  
*See previous same as #1*

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# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/21/08</i>	PROJECT MANAGER <i>M. PINZA</i>	RECORDER <i>[Signature]</i>	
STATION ID <i>FND 07-02 (3)</i>			NAV DATUM <i>84</i>	LATITUDE <i>58°16.478</i>	LONGITUDE <i>134°23.138</i>	
ATTEMPT	TIME STARTED	TIME FINISHED	WATER DEPTH (FT) <i>—</i>	TIDE (FT) <i>—</i>	MLLW (FT) = WATER DEPTH - TIDE <i>+ 8</i>	
SAP DEPTH (FT)	SAP DEPTH - MLLW		TARGET CORE LENGTH (FT)	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN) <i>4</i>	
START TAPE (FT)	FINISH TAPE (FT)		PENETRATION (FT) = FINISH - START		RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1					
2	2					
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

*See previous. Same as #1  
Small macoma throughout*



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/18/08</i>	PROJECT MANAGER <i>MR. PIERA</i>	RECORDER <i>MRP</i>
STATION ID <i>PND-07-02</i>			NAV/DATUM	LATITUDE <i>58°16.493N</i>	LONGITUDE <i>134°23.158W</i>
ATTEMPT <i>1</i>	TIME STARTED <i>10:25</i>	TIME FINISHED <i>10:29</i>	WATER DEPTH (FT) <i>-11.8</i>	TIDE (FT) <i>+1</i>	MLLW (FT) = WATER DEPTH - TIDE <i>-7</i>
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>-7</i>		TARGET CORE LENGTH (FT) <i>7</i>	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN)
START TAPE (FT)	FINISH TAPE (FT)	PENETRATION (FT) = FINISH - START			RECOVERY

PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1					
2	2					
3	3	<i>REFUSAL</i>				
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

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# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/21/08</i>	PROJECT MANAGER <i>M. Pinza</i>	RECORDER <i>[Signature]</i>	
STATION ID <i>PN D07-03 (1)</i>			NAV DATUM <i>84</i>	LATITUDE <i>58°16.494</i>	LONGITUDE <i>134°23.143</i>	
ATTEMPT <i>1 of 3</i>	TIME STARTED	TIME FINISHED	WATER DEPTH (FT) <i>-</i>	TIDE (FT) <i>-</i>	MLLW (FT) = WATER DEPTH - TIDE <i>+8</i>	
SAP DEPTH (FT)	SAP DEPTH - MLLW		TARGET CORE LENGTH (FT)	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN)	
START TAPE (FT)	FINISH TAPE (FT)		PENETRATION (FT) = FINISH - START		RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	<i>10" 1</i>	<i>mixed coarse sediment silt predominantly</i>		<i>Black, brown, grey 3/3 2.54R</i>		<i>Brown looks forrestrial in nature some mussel shells</i>
2	2					
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

*Sample taken at low tide by walking out on the exposed beach.*



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>		DATE <i>11/21/08</i>		PROJECT MANAGER <i>M. Pinza</i>		RECORDER <i>[Signature]</i>	
STATION ID <i>PND 07-03(2)</i>		NAV DATUM <i>84</i>		LATITUDE <i>58° 16.494</i>		LONGITUDE <i>134° 23.143</i>	
ATTEMPT <i>2 of 3</i>	TIME STARTED	TIME FINISHED	WATER DEPTH (FT) —	TIDE (FT) —	MLLW (FT) = WATER DEPTH - TIDE <i>+ 8</i>		
SAP DEPTH (FT)	SAP DEPTH - MLLW		TARGET CORE LENGTH (FT)	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN)		
START TAPE (FT)	FINISH TAPE (FT)		PENETRATION (FT) = FINISH - START			RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC	
1	1	<i>Same as 03(1)</i>					
2	2						
3	3						
4	4						
5	5						
6	6						
7	7						
8	8						
9	9						
10	10						

NOTES

*See previous*

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# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/21/08</i>	PROJECT MANAGER <i>M. Finza</i>	RECORDER <i>L</i>	
STATION ID <i>PND07-03(3)</i>			NAV DATUM <i>84</i>	LATITUDE <i>58°16.494</i>	LONGITUDE <i>134°23.143</i>	
ATTEMPT <i>3 of 3</i>	TIME STARTED	TIME FINISHED	WATER DEPTH (FT) <i>—</i>	TIDE (FT) <i>—</i>	MLLW (FT) = WATER DEPTH - TIDE <i>+ 8</i>	
SAP DEPTH (FT)	SAP DEPTH - MLLW		TARGET CORE LENGTH (FT)	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN) <i>4</i>	
START TAPE (FT)	FINISH TAPE (FT)		PENETRATION (FT) = FINISH - START		RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1	<i>Sand</i>	<i>03(1)</i>			
2	2					
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

*See previous*



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY Douglas harbor		DATE 11/17		PROJECT MANAGER M. Pinza		RECORDER AS	
STATION ID PND07-03		NAV DATUM 84		LATITUDE 58° 16.511		LONGITUDE 134° 23.126	
ATTEMPT	TIME STARTED 4:12	TIME FINISHED → 2nd 4:19	WATER DEPTH (FT) 16	TIDE (FT) 16	MLLW (FT) = WATER DEPTH - TIDE 0		
SAP DEPTH (FT) -14	SAP DEPTH - MLLW 14		TARGET CORE LENGTH (FT) 14	FINAL CORE LENGTH (FT) 0	CORE DIAMETER (IN) 4"		
START TAPE (FT)	FINISH TAPE (FT) -		PENETRATION (FT) = FINISH - START -			RECOVERY -	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC	
1	1						
2	2			Refusal			
3	3						
4	4						
5	5						
6	6						
7	7						
8	8						
9	9						
10	10						

NOTES  
 1st attempt no good. Try again <sup>slightly</sup> ~~same~~ location. Location ~ 40' from 3rd - 4th singer on A slot. 2nd no good. 3rd attempt same location. 3rd start 4:22 - next sheet



# Piston Core / BoxCore CORING LOG

(2)  
copy  
sheet

PROJECT/SURVEY AND Douglas Harbor			DATE 11/17	PROJECT MANAGER M. PINZA	RECORDER AS	
STATION ID PND07-03			NAV DATUM 84	LATITUDE 58° 16.511	LONGITUDE 134° 23.126	
ATTEMPT 3	TIME STARTED	TIME FINISHED	WATER DEPTH (FT) -22	TIDE (FT) 16	MLLW (FT) = WATER DEPTH - TIDE -6	
SAP DEPTH (FT) -14	SAP DEPTH - MLLW 8' 8"		TARGET CORE LENGTH (FT) 8	FINAL CORE LENGTH (FT) —	CORE DIAMETER (IN) 4"	
START TAPE (FT)	FINISH TAPE (FT)	PENETRATION (FT) = FINISH - START —			RECOVERY —	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1					
2	2		refusal			
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES  
 3rd attempt no good ~ some lack in core  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_





# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/18/08</i>	PROJECT MANAGER <i>M. Pinza</i>	RECORDER <i>MP</i>	
STATION ID <i>PND-07-03</i>			NAV DATUM	LATITUDE <i>58°16.519N</i>	LONGITUDE <i>134°23.140W</i>	
ATTEMPT <i>3</i>	TIME STARTED <i>9:00</i>	TIME FINISHED <i>9:07</i>	WATER DEPTH (FT) <i>12</i>	TIDE (FT) <i>+3+1</i>	MLLW (FT) = WATER DEPTH - TIDE <i>11</i>	
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>-3</i>		TARGET CORE LENGTH (FT) <i>3</i>	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN) <i>4"</i>	
START TAPE (FT) <i>-4</i>	FINISH TAPE (FT) <i>-2.5</i>	PENETRATION (FT) = FINISH - START			RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1					
2	2	<i>Refusal</i>				
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

*tide tables do not mesh with actual. Taking 2 ft depth measurement bench based on bathymetry. Depths relate to bench. Penetrated to point of refusal*

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/18/08</i>	PROJECT MANAGER <i>Mr. Pinna</i>	RECORDER <i>MRP</i>	
STATION ID <i>PND-07-04</i>			NAV/DATUM	LATITUDE <i>58° 16.473N</i>	LONGITUDE <i>134° 23.182 W</i>	
ATTEMPT <i>1</i>	TIME STARTED <i>0915</i>	TIME FINISHED <i>0918</i>	WATER DEPTH (FT) <i>10</i>	TIDE (FT) <i>1</i>	MLLW (FT) = WATER DEPTH - TIDE <i>10</i>	
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>-4</i>		TARGET CORE LENGTH (FT) <i>4</i>	FINAL CORE LENGTH (FT) <i>3</i>	CORE DIAMETER (IN) <i>3.125</i>	
START TAPE (FT) <i>+5</i>	FINISH TAPE (FT) <i>-1</i>		PENETRATION (FT) = FINISH - START <i>6</i>		RECOVERY <i>3</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>black silt. off core debris 2 1/2" wood</i>				<i>hemichordate</i>
<i>2</i>	<i>5" 2</i>					<i>lower silt layer composite</i>
<i>3</i>	<i>3</i>	<i>1041 sand, silt blackened layer at lower end (lower 30) on sam plac (archived)</i>				
<i>4</i>	<i>4</i>					
<i>5</i>	<i>5</i>					
<i>6</i>	<i>6</i>					
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

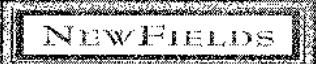
NOTES

*Reached original sediment layer - compact grey mud  
340 upper  
341 hemichordate*



Douglas Harbor  
November 2008

Core Field Log and Processing Photos: Composite 2

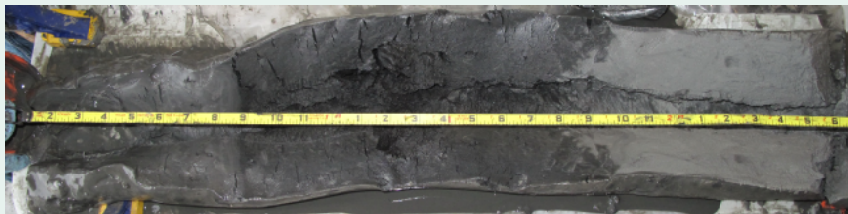


# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/18</i>	PROJECT MANAGER <i>M. Piazza</i>	RECORDER <i>sc</i>	
STATION ID <i>PND07-05</i>			NAV DATUM <i>84</i>	LATITUDE <i>16.497</i>	LONGITUDE <i>23.230</i>	
ATTEMPT <i>1 of</i>	TIME STARTED <i>11315</i>	TIME FINISHED <i>1570</i>	WATER DEPTH (FT) <i>23</i>	TIDE (FT) <i>14</i>	MLLW (FT) = WATER DEPTH - TIDE <i>9</i>	
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>5</i>		TARGET CORE LENGTH (FT) <i>5</i>	FINAL CORE LENGTH (FT) <i>4.5</i>	CORE DIAMETER (IN) <i>4"</i>	
START TAPE (FT) <i>17</i>	FINISH TAPE (FT) <i>22</i>		PENETRATION (FT) = FINISH - START <i>5</i>		RECOVERY <i>4.5</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1	<i>silt</i> ↓		<i>Grey</i> ↓	<i>5 upper</i> ↓	
2	2	<i>silt or fine sand</i> ↓		<i>Black</i> ↓	<i>5</i> ↓	<i>wood chunk</i>
3	3	<i>fine sand &amp; 2'8" silt</i> ↓		<i>Grey</i> ↓	<i>5 Lower</i> ↓	
4	4	<i>fine sand &amp; silt</i> ↓		<i>Grey</i> ↓	<i>5</i> ↓	
5	5	<i>coarse sand fine silt</i> ↓		<i>Grey</i> ↓	<i>5</i> ↓	
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

*0-2.8 A*  
*2.8-4.5 B*



PND07-05A



PND07-05B



### Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbour</i>			DATE <i>11/18</i>	PROJECT MANAGER <i>M. Pinza</i>	RECORDER <i>dr</i>	
STATION ID <i>PND07-05 (2)</i>			NAV DATUM <i>84</i>	LATITUDE <i>16.497</i>	LONGITUDE <i>23.230</i>	
ATTEMPT <i>1 of</i>	TIME STARTED <i>1525</i>	TIME FINISHED <i>1530</i>	WATER DEPTH (FT) <i>23</i>	TIDE (FT) <i>14</i>	MLLW (FT) = WATER DEPTH - TIDE <i>9</i>	
SAP DEPTH (FT) <i>14</i>	SAP DEPTH - MLLW <i>5</i>		TARGET CORE LENGTH (FT) <i>5</i>	FINAL CORE LENGTH (FT) <i>3'1"</i>	CORE DIAMETER (IN) <i>4"</i>	
START TAPE (FT) <i>17</i>	FINISH TAPE (FT) <i>21</i>		PENETRATION (FT) = FINISH - START <i>4</i>		RECOVERY <i>3'1"</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1	<i>Silt</i> <i>Silt w sand</i>		<i>Dark grey</i>		
2	2	<i>19" ↓</i> <i>Fine sand</i>		<i>Black</i> <i>Corey</i>		
3	3	<i>26" ↓</i> <i>Fine sand</i> <i>Silt</i>		<i>Corey</i> <i>↓</i>		<i>no photo</i>
4	4			<i>↓</i>		
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

*C-2.5 A*  
*2.5-3.1 B*



PND07-05 (2)

Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/18/08</i>	PROJECT MANAGER <i>MR Piazza</i>	RECORDER <i>MFP</i>	
STATION ID <i>PND-07-06</i>			NAV DATUM	LATITUDE <i>58° 16.506 N</i>	LONGITUDE <i>134° 23.248 W</i>	
ATTEMPT <i>1 of</i>	TIME STARTED <i>1356</i>	TIME FINISHED <i>1400</i>	WATER DEPTH (FT) <i>20</i>	TIDE (FT) <i>11</i>	MLLW (FT) = WATER DEPTH - TIDE <i>9'</i>	
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>-9</i>	TARGET CORE LENGTH (FT) <i>5</i>	FINAL CORE LENGTH (FT) <i>4.5</i>	CORE DIAMETER (IN) <i>4"</i>		
START TAPE (FT) <i>14</i>	FINISH TAPE (FT) <i>14</i>	PENETRATION (FT) = FINISH - START <i>18.5</i>			RECOVERY <i>4' 2"</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1	<i>silt w/ sand</i>		<i>dark grey</i>	<i>6 upper</i>	<i>Macoma (live)</i>
2	2	<i>1 1/2"</i>		<i>grey</i>		
3	3	<i>26"</i> <i>Fine Sand + silt</i> <i>Fine Sand + silt</i>		<i>grey</i>	<i>6 lower</i>	
4	4					
5	5	<i>4 1/2"</i>				
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

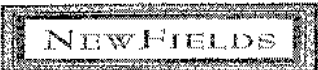
*cut 0-2.5 = PND-07-06 A*  
*2.5-4.2 = PND07-06 B*



PND07-06A



PND07-06B



### Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/18/08</i>	PROJECT MANAGER <i>MR Piroga</i>	RECORDER <i>MRP</i>	
STATION ID <i>PND-07-06 (2)</i>			NAV DATUM	LATITUDE	LONGITUDE	
ATTEMPT <i>2</i>	TIME STARTED <i>1430</i>	TIME FINISHED <i>1432</i>	WATER DEPTH (FT) <i>20'</i>	TIDE (FT) <i>11</i>	MLLW (FT) = WATER DEPTH - TIDE <i>9</i>	
SAP DEPTH (FT) <i>14</i>	SAP DEPTH - MLLW <i>14-9</i>		TARGET CORE LENGTH (FT) <i>5</i>	FINAL CORE LENGTH (FT) <i>3'</i>	CORE DIAMETER (IN)	
START TAPE (FT) <i>14.5</i>	FINISH TAPE (FT) <i>18</i>	PENETRATION (FT) = FINISH - START <i>3.5</i>			RECOVERY <i>3'</i>	
PEN. DEP. (FT)	RETRV. DEP. (FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>Silt</i>		<i>Black</i>	<i>6 upper</i>	
<i>2</i>	<i>2</i>	<i>Silt</i>		<i>Grey</i>		
<i>3</i>	<i>3</i>					
<i>4</i>	<i>4</i>					
<i>5</i>	<i>5</i>					
<i>6</i>	<i>6</i>					
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

NOTES  
*Second core at PND-07-06(2) - label*



PND07-06 (2)

PROJECT/SURVEY <i>Doughlas Harbor</i>			DATE <i>11-19</i>		PROJECT MANAGER		RECORDER <i>AS</i>	
STATION ID <i>PND07-07</i>			NAV DATUM		LATITUDE <i>S80 16.489</i>		LONGITUDE <i>134° 23.223</i>	
ATTEMPT <i>1</i>	TIME STARTED <i>4:22</i>	TIME FINISHED		WATER DEPTH (FT) <i>20.5</i>	TIDE (FT) <i>12</i>	MLLW (FT) = WATER DEPTH - TIDE <i>-8.5</i>		
SAP DEPTH (FT) <i>-14</i>		SAP DEPTH - MLLW <i>-8.5</i>		TARGET CORE LENGTH (FT) <i>5.5'</i>	FINAL CORE LENGTH (FT) <i>2'-7"</i>	CORE DIAMETER (IN) <i>4</i>		
START TAPE (FT) <i>13</i>		FINISH TAPE (FT) <i>18</i>		PENETRATION (FT) = FINISH - START <i>5'</i>			RECOVERY <i>2'-7"</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH		MISC	
<i>1</i>	<i>1</i>	<i>Silt</i>	<i>Sulfide</i>	<i>Black</i>	<i>7</i>		<i>Shell hash &amp; wood debris</i>	
<i>2</i>	<i>2</i>	↓	↓	↓	↓		↓	
<i>3</i>	<i>3</i>	<i>silt upward</i>	---	---	---		↓	
<i>4</i>	<i>4</i>							
<i>5</i>	<i>5</i>							
<i>6</i>	<i>6</i>							
<i>7</i>	<i>7</i>							
<i>8</i>	<i>8</i>							
<i>9</i>	<i>9</i>							
<i>10</i>	<i>10</i>							

NOTES

*moved to south side of Head float*  
*1st attempt - no penetration moved a few feet closer to gangway*  
*for 2nd*



PND-07-07



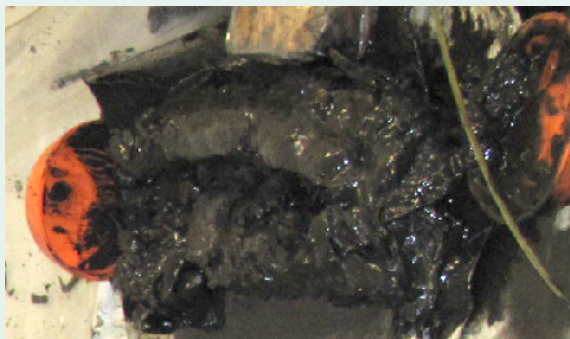
**NEWFIELDS**

**Piston Core / BoxCore CORING LOG**

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11-19</i>	PROJECT MANAGER <i>meeg</i>	RECORDER <i>AS</i>	
STATION ID <i>PND07-07 (2nd core)</i>			NAV DATUM	LATITUDE	LONGITUDE	
ATTEMPT <i>1</i>	TIME STARTED <i>4:57</i>	TIME FINISHED	WATER DEPTH (FT) <i>21</i>	TIDE (FT) <i>13</i>	MLLW (FT) = WATER DEPTH - TIDE <i>-8</i>	
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>-8</i>		TARGET CORE LENGTH (FT) <i>6</i>	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN) <i>4</i>	
START TAPE (FT) <i>15</i>	FINISH TAPE (FT)		PENETRATION (FT) = FINISH - START		RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>Silt w/ sand</i>	<i>Sulfur Iodine</i>	<i>Black</i> ↓		<i>Shell hash woody debris</i>
<i>2</i>	<i>2</i>					
<i>3</i>	<i>3</i>					
<i>4</i>	<i>4</i>					
<i>5</i>	<i>5</i>					
<i>6</i>	<i>6</i>					
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

NOTES

*Moved to south side of headwalk*



PND-07-07 (2)

PROJECT/SURVEY Pouglas harbor			DATE 11/18	PROJECT MANAGER M. Pinza	RECORDER [Signature]
STATION ID NF08-17			NAV DATUM 84	LATITUDE 16.496	LONGITUDE 23.238
ATTEMPT 1 of	TIME STARTED 1555	TIME FINISHED 1600	WATER DEPTH (FT) 24	TIDE (FT) 15	MLLW (FT) = WATER DEPTH - TIDE 9
SAP DEPTH (FT) 8.14	SAP DEPTH - MLLW 5		TARGET CORE LENGTH (FT) 5	FINAL CORE LENGTH (FT) 4.0	CORE DIAMETER (IN) 1"
START TAPE (FT) 18.5	FINISH TAPE (FT) 22.5		PENETRATION (FT) = FINISH - START 4		RECOVERY 4

PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1	Silt w sand		Black	17 upper	
2	2	↓ 2'		↓	↓	Hemichordate
3	3	Silt 2' w/sand Silt w/sand		Grey ↓ Black & Grey	↓	
4	4	Fine sand + silt		Grey	17 Lower	
5	5			↓	↓	
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

0-2.5 A  
2.5-4.0 B



NF08-17A (1)



NF08-17B (1)



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/18</i>	PROJECT MANAGER <i>M. Pinza</i>	RECORDER <i>JW</i>	
STATION ID <i>NF08-17(2)</i>			NAV DATUM	LATITUDE <i>16.496</i>	LONGITUDE <i>23-238</i>	
ATTEMPT <i>1st</i>	TIME STARTED <i>16105</i>	TIME FINISHED <i>1617</i>	WATER DEPTH (FT) <i>24</i>	TIDE (FT) <i>15</i>	MLLW (FT) = WATER DEPTH - TIDE <i>9</i>	
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>5</i>		TARGET CORE LENGTH (FT) <i>5</i>	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN) <i>4"</i>	
START TAPE (FT) <i>20</i>	FINISH TAPE (FT) <i>25</i>		PENETRATION (FT) = FINISH - START <i>5</i>		RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1	<i>Silt</i>		<i>Black and Dark Grey marl</i>	<i>17 upper</i>	<i>Macoma</i>
2	2	<i>↓</i>		<i>↓</i>	<i>↓</i>	
3	3	<i>1'10" Fine sand &amp; silt</i>		<i>Grey</i>	<i>17 lower</i>	
4	4	<i>↓</i> <i>Fine sand &amp; silt</i>		<i>↓</i>	<i>↓</i>	
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES



NF08-17A (2)



NF08-17B (2)

Douglas Harbor  
November 2008

Core Field Log and Processing Photos: Composite 4A



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/21</i>	PROJECT MANAGER <i>M. Pinza</i>	RECORDER <i>[Signature]</i>	
STATION ID <i>PND07-14 (1)</i>			NAV DATUM	LATITUDE <i>58°16.527</i>	LONGITUDE <i>134°23.185</i>	
ATTEMPT <i>1 of 2</i>	TIME STARTED <i>1240</i>	TIME FINISHED <i>1245</i>	WATER DEPTH (FT) <i>16.5</i>	TIDE (FT) <i>6.5</i>	MLLW (FT) = WATER DEPTH - TIDE <i>10</i>	
SAP DEPTH (FT) <i>14</i>	SAP DEPTH - MLLW <i>4</i>	TARGET CORE LENGTH (FT) <i>4</i>	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN) <i>4"</i>		
START TAPE (FT)	FINISH TAPE (FT)	PENETRATION (FT) = FINISH - START <i>3</i>			RECOVERY <i>1'</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<del><i>Silt w/ sand</i></del> <i>Silt</i>		<del><i>Dark grey</i></del> <i>black</i>	<i>14 upper</i>	
<i>2</i>	<i>2</i>					
<i>3</i>	<i>3</i>					
<i>4</i>	<i>4</i>					
<i>5</i>	<i>5</i>					
<i>6</i>	<i>6</i>					
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

NOTES



PND07-14



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas harbor</i>			DATE <i>11/21</i>	PROJECT MANAGER <i>M. Pinza</i>	RECORDER <i>de</i>	
STATION ID <i>FND07-14(2)</i>			NAV DATUM	LATITUDE <i>16.527</i>	LONGITUDE <i>23.185</i>	
ATTEMPT <i>2 of 2</i>	TIME STARTED <i>1300</i>	TIME FINISHED	WATER DEPTH (FT) <i>16.5</i>	TIDE (FT) <i>6.5</i>	MLLW (FT) = WATER DEPTH - TIDE <i>10</i>	
SAP DEPTH (FT) <i>14</i>	SAP DEPTH - MLLW <i>4</i>		TARGET CORE LENGTH (FT) <i>4</i>	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN) <i>4"</i>	
START TAPE (FT)	FINISH TAPE (FT)	PENETRATION (FT) = FINISH - START			RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1					
2	2			<i>Not used for testing</i>		
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

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### Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11-18</i>	PROJECT MANAGER	RECORDER <i>AS</i>	
STATION ID <i>PND 07-16</i>			NAV DATUM	LATITUDE <i>58°16.515</i>	LONGITUDE <i>134°23.163</i>	
ATTEMPT <i>1</i>	TIME STARTED <i>11:55A</i>	TIME FINISHED <i>11:57</i>	WATER DEPTH (FT) <i>16.5</i>	TIDE (FT) <i>5.5'</i>	MLLW (FT) = WATER DEPTH - TIDE <i>11'</i>	
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>3</i>	TARGET CORE LENGTH (FT) <i>3</i>	FINAL CORE LENGTH (FT) <i>4'</i>	CORE DIAMETER (IN) <i>4"</i>		
START TAPE (FT) <i>5 1/2'</i>	FINISH TAPE (FT) <i>9 1/2'</i>	PENETRATION (FT) = FINISH - START <i>4</i>			RECOVERY <i>2 1/2'</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>0 silt 14" Fine Sand</i>		<i>Black Dark Grey</i>	<i>16 upper</i>	<i>Macoma shells</i>
<i>2</i>	<i>2</i>	<i>14" hard packed Fine Sand</i>		<i>Corey</i>	<i>16 upper</i>	
<i>3</i>	<i>3</i>	<i>22 1/2" silt</i>				
<i>4</i>	<i>4</i>					
<i>5</i>	<i>5</i>					
<i>6</i>	<i>6</i>					
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

NOTES  
*8" lost from tip*



PND07-16

PROJECT/SURVEY <i>Douglas Haeboc</i>			DATE <i>11/19/08</i>	PROJECT MANAGER <i>M Pina</i>	RECORDER <i>MRP</i>	
STATION ID <i>NF08-19</i>			NAV DATUM	LATITUDE <i>58° 16.533 N</i>	LONGITUDE <i>134° 23.221 W</i>	
ATTEMPT <i>1</i>	TIME STARTED <i>12:05</i>	TIME FINISHED <i>12:08</i>	WATER DEPTH (FT) <i>15'5"</i>	TIDE (FT) <i>5</i>	MLLW (FT) = WATER DEPTH - TIDE <i>10'5"</i>	
SAP DEPTH (FT) <i>14</i>	SAP DEPTH - MLLW <i>4'5"</i>		TARGET CORE LENGTH (FT) <i>4'5"</i>	FINAL CORE LENGTH (FT) <i>4'7"</i>	CORE DIAMETER (IN)	
START TAPE (FT) <i>3'6"</i>	FINISH TAPE (FT) <i>8'</i>	PENETRATION (FT) = FINISH - START <i>4'7"</i>			RECOVERY <i>4'7"</i>	
PEN. DEP. (FT)	RETRV. DEP. (FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>silt</i>	<i>NONE</i>	<i>Grey</i>	<i>19 upper</i>	<i>Shell debris</i>
<i>2</i>	<i>2</i>			<i>black</i>		
<i>3</i>	<i>3</i>	<i>silt</i>		<i>Black</i>		
<i>4</i>	<i>4</i>	<i>Fine sand silt</i>		<i>Grey</i>	<i>19 Lower</i>	
<i>5</i>	<i>5</i>			<i>Dark Grey</i>		
<i>6</i>	<i>6</i>					
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

NOTES  
*A 0 - 2'5"*  
*B 2'5" - end*



NF08-19A



NF08-19B







# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/18/08</i>	PROJECT MANAGER <i>MR. Piroza</i>	RECORDER <i>MRP</i>	
STATION ID <i>NF-08-20</i>			NAV DATUM	LATITUDE <i>58° 16.517</i>	LONGITUDE <i>134° 23.189</i>	
ATTEMPT <i>1</i>	TIME STARTED <i>1420</i>	TIME FINISHED <i>1424</i>	WATER DEPTH (FT) <i>18'5"</i>	TIDE (FT) <i>8</i>	MLLW (FT) = WATER DEPTH - TIDE <i>10.5'</i>	
SAP DEPTH (FT) <i>14'</i>	SAP DEPTH - MLLW <i>10.5 10.5</i>		TARGET CORE LENGTH (FT) <i>4.5</i>	FINAL CORE LENGTH (FT) <i>7'6"</i>	CORE DIAMETER (IN)	
START TAPE (FT) <i>7'5</i>	FINISH TAPE (FT) <i>11.5 12.5</i>		PENETRATION (FT) = FINISH - START <i>5</i>		RECOVERY	
PEN. DEP. (FT)	RETRV. DEP. (FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>2" mussel &amp; plant debris</i> ↓ <i>Silt</i>	<i>NONE</i>	<i>Grey</i> ↓ <i>Black</i>	<i>20 upper</i>	<i>Nephtys</i>
<i>2</i>	<i>2</i>	↓	↓	<i>Grey Black</i>		
<i>3</i>	<i>3</i>	↓	↓	↓	<i>20 lower</i>	
<i>4</i>	<i>4</i>	<i>Hard pack silt</i>		<i>Grey</i>		
<i>5</i>	<i>5</i>	<i>hard silt clay</i>		<i>grey to dark grey</i>		
<i>6</i>	<i>6</i>	<i>hard silt clay</i>		<i>grey to dark grey</i>		
<i>7</i>	<i>7</i>	<i>small hash silt</i>	↓	<i>Grey</i>		
<i>8</i>	<i>8</i>	<i>silt</i>	<i>Remove &amp; from past dredge</i>	<i>Black</i>	<i>sample dredge</i>	
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

NOTES  
*hit native sediment layer*  
 A *0 - 2'10"*  
 B *2'10" - 5'8"*  
 C *5'8" - 7'6" - below project depth*



NF08-20A



NF08-20A (upper 11.5")

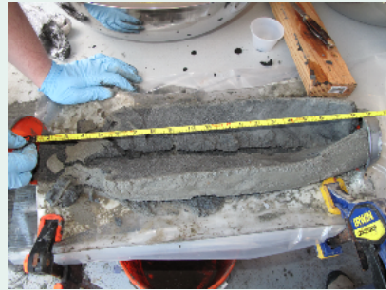


# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/19/08</i>	PROJECT MANAGER <i>M. Finza</i>	RECORDER <i>J</i>		
STATION ID <i>NF-08-23</i>			NAV DATUM <i>84</i>	LATITUDE <i>58°16.504</i>	LONGITUDE <i>134°23.151</i>		
ATTEMPT <i>1</i>	TIME STARTED <i>1456</i>	TIME FINISHED	WATER DEPTH (FT) <i>19'</i>	TIDE (FT) <i>10'</i>	MLLW (FT) = WATER DEPTH - TIDE <i>9'</i>		
SAP DEPTH (FT) <i>14</i>	SAP DEPTH - MLLW <i>5</i>	TARGET CORE LENGTH (FT) <i>5</i>	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN) <i>4</i>			
START TAPE (FT) <i>8</i>	FINISH TAPE (FT) <i>14</i>	PENETRATION (FT) = FINISH - START <i>6</i>			RECOVERY		
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC	
<i>1</i>	<i>1</i>	<i>3/4" silt w/ mussel shells</i>	<i>Shells Indine</i>	<i>Black</i>	<i>23 upper</i>	<i>Hard chardate</i>	
<i>2</i>	<i>2</i>	<i>1/2" sand</i>		<i>Black</i>			
<i>3</i>	<i>3</i>	<i>silt w/ clay</i>		<i>Black</i>			
<i>4</i>	<i>4</i>	<i>1" silt moist sand</i>		<i>Grey</i>		<i>23 lower</i>	
<i>5</i>	<i>5</i>	<i>hard sand</i>		<i>Grey</i>			
<i>6</i>	<i>6</i>	<i>hard silt</i>		<i>Grey</i>			
<i>7</i>	<i>7</i>						
<i>8</i>	<i>8</i>						
<i>9</i>	<i>9</i>						
<i>10</i>	<i>10</i>						

### NOTES

*A) core split we had to start to  
B) new core to contain sample  
C)*





# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/19/08</i>	PROJECT MANAGER <i>M. Piza</i>	RECORDER <i>MPP</i>	
STATION ID <i>NF-08-23</i>			NAV DATUM	LATITUDE <i>58° 16.504</i>	LONGITUDE <i>134° 23.151</i>	
ATTEMPT <i>1</i>	TIME STARTED <i>1456</i>	TIME FINISHED	WATER DEPTH (FT) <i>19'</i>	TIDE (FT) <i>10'</i>	MLLW (FT) = WATER DEPTH - TIDE <i>9'</i>	
SAP DEPTH (FT) <i>14</i>	SAP DEPTH - MLLW <i>9'</i>	TARGET CORE LENGTH (FT) <i>5'</i>	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN) <i>4</i>		
START TAPE (FT) <i>8'</i>	FINISH TAPE (FT) <i>14'</i>	PENETRATION (FT) = FINISH - START <i>6</i>			RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>5.11/ clay</i>		<i>Black</i>	<i>23 upper</i>	<i>wood debris fishing line (removed)</i>
<i>2</i>	<i>2</i>	<i>1-16" silt sand moist</i>		<i>Grey</i> <i>Grey</i>	<i>23 lower</i>	
<i>3</i>	<i>3</i>					
<i>4</i>	<i>4</i>					
<i>5</i>	<i>5</i>					
<i>6</i>	<i>6</i>					
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

**NOTES**

*A - Core split we had to shift to new*  
*B / Core to contain sediment*  
*C*

Douglas Harbor  
November 2008

Core Field Log and Processing Photos: Composite 4B

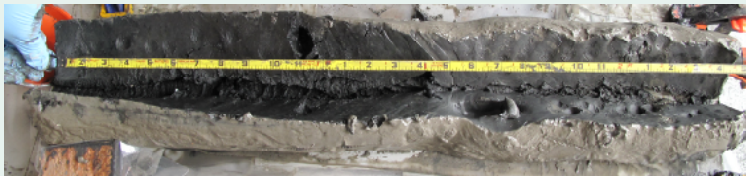


# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/19/08</i>	PROJECT MANAGER <i>MR Pinza</i>	RECORDER <i>MRP</i>	
STATION ID <i>PND-07-13</i>			NAV/DATUM <i>58° 16.507</i>	LATITUDE <i>134° 23.232</i>	LONGITUDE	
ATTEMPT <i>1</i>	TIME STARTED <i>10:48</i>	TIME FINISHED <i>10:51</i>	WATER DEPTH (FT) <i>16 1/2'</i>	TIDE (FT) <i>5'</i>	MLLW (FT) = WATER DEPTH - TIDE <i>11 1/2'</i>	
SAP DEPTH (FT) <i>14</i>	SAP DEPTH - MLLW <i>11 1/2'</i>		TARGET CORE LENGTH (FT) <i>3</i>	FINAL CORE LENGTH (FT) <i>4'</i>	CORE DIAMETER (IN)	
START TAPE (FT) <i>11'</i>	FINISH TAPE (FT) <i>15'</i>		PENETRATION (FT) = FINISH - START <i>4'</i>		RECOVERY <i>4'</i>	
PEN. DEP. (FT)	RETRV. DEP. (FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>Silt (compacted)</i>		<i>Dark Grey</i>	<i>13 upper</i>	<i>Hemichordate</i>
<i>2</i>	<i>2</i>	<i>wet</i>				<i>Lead Macoma shells</i>
<i>3</i>	<i>3</i>	<i>25" ↓ 40" silt</i>		<i>light Grey Grey</i>		
<i>4</i>	<i>4</i>	<i>Silt w/ 4 1/2" sand</i>			<i>13 Lower</i>	
<i>5</i>	<i>5</i>					
<i>6</i>	<i>6</i>					
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

NOTES

*A 0-2.5'*  
*B 2.5-4'*



PND07-13A



PND07-13B

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11-18</i>	PROJECT MANAGER <i>M. PINZA</i>	RECORDER <i>AS</i>	
STATION ID <i>PND 07-15</i>			NAV DATUM	LATITUDE <i>58° 16.501</i>	LONGITUDE <i>134 23.181</i>	
ATTEMPT <i>1</i>	TIME STARTED <i>11:15A</i>	TIME FINISHED <i>11:17</i>	WATER DEPTH (FT) <i>16</i>	TIDE (FT) <i>5</i>	MLLW (FT) = WATER DEPTH - TIDE <i>11</i>	
SAP DEPTH (FT) <i>~14</i>	SAP DEPTH - MLLW <i>-3</i>		TARGET CORE LENGTH (FT) <i>3</i>	FINAL CORE LENGTH (FT) <i>4</i>	CORE DIAMETER (IN) <i>4"</i>	
START TAPE (FT) <i>6</i>	FINISH TAPE (FT) <i>10</i>		PENETRATION (FT) = FINISH - START <i>4</i>		RECOVERY <i>4'-2"</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>silt (compact)</i>		<i>Dark grey</i>	<i>15 upper</i>	<i>Hemichordate</i>
<i>2</i>	<i>2</i>	<i>1.7" dry silt</i>		<i>grey</i>	<i>15</i>	<i>Horse clam + macoma</i>
<i>3</i>	<i>3</i>	<i>2.8" silt w/sand</i>		<i>grey</i>	<i>lower</i>	
<i>4</i>	<i>4</i>	<i>silt (loose)</i>				
<i>5</i>	<i>5</i>	<i>0.4"</i>				
<i>6</i>	<i>6</i>					
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

NOTES *cut @ 2 1/2" A 0-2 1/2 B 2 1/2 -> 4' 2"*



PND07-15A



PND07-15B

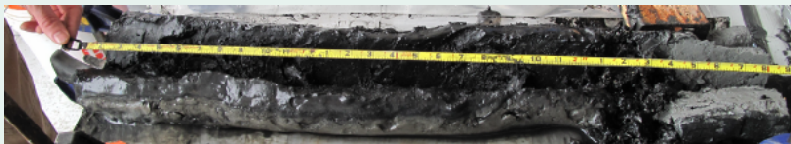
PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/19/08</i>	PROJECT MANAGER <i>M Pinza</i>	RECORDER <i>MRP</i>	
STATION ID <i>PAD-NF-08-18</i>			NAV DATUM	LATITUDE <i>58°16.514N</i>	LONGITUDE <i>134°23.237W</i>	
ATTEMPT <i>1</i>	TIME STARTED <i>11:30</i>	TIME FINISHED <i>11:33</i>	WATER DEPTH (FT) <i>12.5'</i>	TIDE (FT) <i>5'</i>	MLLW (FT) = WATER DEPTH - TIDE <i>7.5'</i>	
SAP DEPTH (FT) <i>14</i>	SAP DEPTH - MLLW <i>6.5'</i>		TARGET CORE LENGTH (FT) <i>6.5'</i>	FINAL CORE LENGTH (FT) <i>5.2'</i>	CORE DIAMETER (IN)	
START TAPE (FT) <i>6'10"</i>	FINISH TAPE (FT) <i>7.5'</i>		PENETRATION (FT) = FINISH - START <i>6.5'</i>		RECOVERY	
PEN. DEP. (FT)	RETRV. DEP. (FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>5.1 ft w/ 1/8" shell wash silt w/</i>	<i>Fine sulfur</i>	<i>Black</i>	<i>18 upper</i>	<i>4 Hems chlor dates</i>
<i>2</i>	<i>2</i>	<i>sand some shells</i>		<i>Black</i>		
<i>3</i>	<i>3</i>	<i>2'10 silt</i>		<i>Black</i>		
<i>4</i>	<i>4</i>	<i>1/3" shell wash 3" wood band</i>		<i>Black</i>		
<i>5</i>	<i>5</i>	<i>4.5 Sandy silt</i>		<i>Light grey</i>	<i>18 Lower</i>	<i>Used in composite not enough material for Archive</i>
<i>6</i>	<i>6</i>					
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

NOTES

*Sulfide smell - dark black sediment*  
*Recold note: material in core catcher*  
*A - 0 - 2'10"*  
*B - 2'10" - 5.2"*

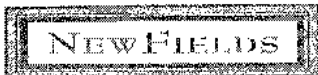


NF08-18A



NF08-18B





# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>11/16/08</i>	PROJECT MANAGER <i>Mr. Pina</i>	RECORDER <i>MLP</i>	
STATION ID <i>NF08-21</i>			NAV/DATUM	LATITUDE <i>58° 16.500N</i>	LONGITUDE <i>134° 23.207W</i>	
ATTEMPT <i>1</i>	TIME STARTED <i>1400</i>	TIME FINISHED <i>1403</i>	WATER DEPTH (FT) <i>17'</i>	TIDE (FT) <i>8</i>	MLLW (FT) = WATER DEPTH - TIDE <i>9</i>	
SAP DEPTH (FT) <i>14</i>	SAP DEPTH - MLLW <i>5</i>	TARGET CORE LENGTH (FT) <i>5'</i>	FINAL CORE LENGTH (FT) <i>5'2"</i>	CORE DIAMETER (IN)		
START TAPE (FT) <i>6'6"</i>	FINISH TAPE (FT) <i>12'6"</i>	PENETRATION (FT) = FINISH - START <i>6'</i>			RECOVERY <i>5'2"</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
<i>1</i>	<i>1</i>	<i>Silt</i> <i>10" ↓</i> <i>Sandy</i>		<i>Dark Grey silt</i> <i>↓</i> <i>Black</i>	<i>21 upper</i> <i>↓</i>	<i>Shell hash</i> <i>↓</i>
<i>2</i>	<i>2</i>	<i>Silt</i> <i>↓</i>		<i>↓</i>	<i>↓</i>	<i>↓</i>
<i>3</i>	<i>3</i>	<i>Sandy silt</i> <i>↓</i>		<i>Black</i> <i>↓</i>	<i>↓</i>	<i>↓</i>
<i>4</i>	<i>4</i>	<i>Compacted silt</i> <i>↓</i>		<i>Grey</i> <i>↓</i>	<i>21 Lower</i> <i>↓</i>	
<i>5</i>	<i>5</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	
<i>6</i>	<i>6</i>			<i>Dark grey</i> <i>↓</i>	<i>↓</i>	
<i>7</i>	<i>7</i>					
<i>8</i>	<i>8</i>					
<i>9</i>	<i>9</i>					
<i>10</i>	<i>10</i>					

NOTES

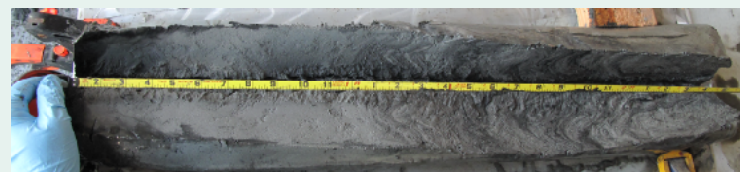
*encountered native material*

*A 0 - 2'7"*

*B 2'7" - 5'2"*



NF08-21A



NF08-21B





# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas</i>			DATE <i>11-19-08</i>	PROJECT MANAGER <i>Meg Pinza</i>	RECORDER <i>AS</i>	
STATION ID <i>NF08-22</i>			NAV DATUM	LATITUDE <i>58°16.080</i>	LONGITUDE <i>134°23.180</i>	
ATTEMPT <i>2</i>	TIME STARTED <i>3:48</i>	TIME FINISHED <i>3:52</i>	WATER DEPTH (FT) <i>20'</i>	TIDE (FT) <i>10.5</i>	MLLW (FT) = WATER DEPTH - TIDE <i>9.5</i>	
SAP DEPTH (FT) <i>-14</i>	SAP DEPTH - MLLW <i>-9.5</i>		TARGET CORE LENGTH (FT) <i>4.5'</i>	FINAL CORE LENGTH (FT) <i>4'2"</i>	CORE DIAMETER (IN) <i>4"</i>	
START TAPE (FT) <i>10</i>	FINISH TAPE (FT) <i>16</i>	PENETRATION (FT) = FINISH - START <i>4.5'</i>			RECOVERY <i>4'2"</i>	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1	<i>Silt w/ wood debris</i>	<i>None</i>	<i>Tan</i>	<i>22 upper</i>	
		<i>Silt w/ shell hash</i>		<i>Dark grey</i>		
3	3	<i>2'6" Sandy silt</i>	<i>None</i>	<i>Dark grey</i>		
4	4	<i>Sandy silt (compact)</i>		<i>Light grey</i>		
5	5	<i>4'4" (Dry)</i>				
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES

*0-2.5 A*  
*2.5-4+ B*



NF08-22A



NF08-22B



# Piston Core / BoxCore CORING LOG

PROJECT/SURVEY <i>Douglas Harbor</i>			DATE <i>4/19</i>	PROJECT MANAGER <i>M. Pinta</i>	RECORDER <i>[Signature]</i>	
STATION ID <i>NF08-22</i>			NAV DATUM	LATITUDE <i>58 16.082</i>	LONGITUDE <i>134 23.180</i>	
ATTEMPT <i>1 of</i>	TIME STARTED	TIME FINISHED	WATER DEPTH (FT) <i>20'</i>	TIDE (FT) <i>10.5</i>	MLLW (FT) = WATER DEPTH - TIDE <i>9.5</i>	
SAP DEPTH (FT) <i>74</i>	SAP DEPTH - MLLW <i>Max = 9.5</i>		TARGET CORE LENGTH (FT) <i>4.5</i>	FINAL CORE LENGTH (FT)	CORE DIAMETER (IN)	
START TAPE (FT)	FINISH TAPE (FT)		PENETRATION (FT) = FINISH - START		RECOVERY	
PEN. DEP.(FT)	RETRV. DEP.(FT)	SEDIMENT TYPE	ODOR	COLOR (CHROMA/VALUE/HUE)	SAMPLE ID BY DEPTH	MISC
1	1					
2	2					
3	3					
4	4					
5	5					
6	6					
7	7					
8	8					
9	9					
10	10					

NOTES  
*2.5 off of A float*  
*- lost catcher head + sediment when extracted from ground*

Douglas Harbor  
November 2008

Disposal Site Field Information

&

Compositing of Reference Samples

not in disposal site

STATION COORDINATE LOG  
For Van Veen or Box Core

Project: Douglas Harbor  
Survey Number: 1 Disposal Site

Cruise Director: M Pinna  
Recorder: MLP

DATE	TIME	STATION	DROP NO.	LATITUDE	LONGITUDE	DEPTH (m)	#
11/19/08	8:05	1 photo 20-31	1	58° 16.7379	134° 23.0205	128	57% fines
11/19/08	8:30	2 <del>Corner A</del> photo 32-35	1	58° 16.4428	134° 23.5095	123	82%
		2 Hand-held GPS	1	58° 16.412	134° 22.408		
11/19/08	9:00	3 <del>Corner D</del> Hand-held	1	58° 16.706	134° 22.895	128	70% fines
		3 <del>Corner D</del> photo	1	58° 16.6957	134° 22.8657	128	70%
	9:15	4 <del>Corner B</del> photo	1	58° 16.6848	134° 22.7908	129	80%
	9:30	5 <del>Corner C</del>	1	58° 16.7141	134° 22.9878	125	50%
	9:37	6 <del>Corner D</del> photo 46	1	58° 16.6219	134° 22.8145	126	79%
	9:50	7 middle	1	58° 16.7090	134° 22.8634	126	73%
7# 8cm	11:20:08	Ref 01	1	13.1920	16.2244	120	62%
8	-		2	↓	↓	↓	
8	-		3	↓	↓	↓	
8	10:00	↓	4	↓	↓	↓	
8 1/2	10:12	Ref 02	1	13.5260	16.5481	112	67%
8 1/2	10:40		2	↓	↓	↓	
8			3	↓	↓	↓	
8			4	↓	↓	↓	
7 1/2	11:25		5	↓	↓	↓	
8 1/2	11:38	Ref 03	1	58 13.9312	134 17.3443	116	55%
9	11:45		2				

piece of cable in the sample



## Notes on Sediment Characteristics for the Reference Stations

General note: sediments were mixed after removing cobble until color and texture appear consistent; samples collected for chemistry and bioassays represent grand composite, remainder of sediment was put into new bags, labeled and placed in cooler

### Reference 01

- Sipunculid
- Silt/clay fraction of sand and cobble <8 inches

#### Photo Log for Reference-01



Figure 1. Composite and cobble (frame 327)

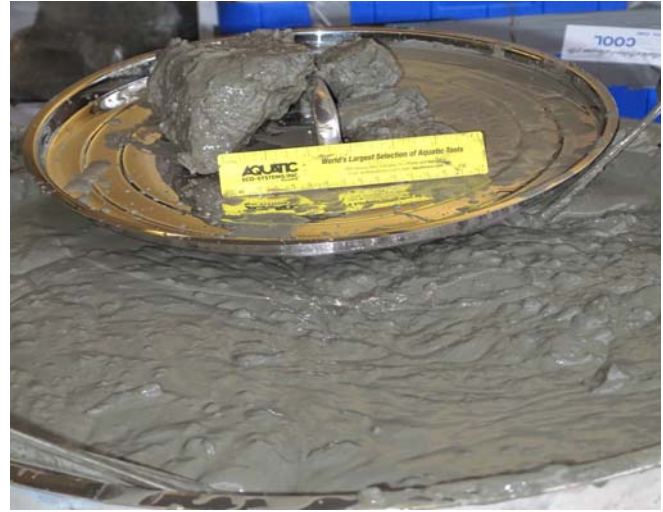


Figure 2. Close-up photo (frame 328)

### Reference 02

- Sipunculid, Maldanidae; Large Brachiopoda, Nephtys
- Silt with some sand and cobbles < 4 inches

#### Photo Log for Reference-02



Figure 3. Compositated sediment with cobble (frame 326)

### Reference-03

- Sandy-silt environment with cobble.
- Brachiopods, corals, and jingles present.
- Size of cobble ranges from 3 to 4 inches in diameter. Only one living attached brachiopod.

### Photo Log for Reference-03



**Figure 4. Solitary coral fragment on cobble (frame 313)**



**Figure 5. Sediment bowl with cobble (frame 314)**



**Figure 6. Brachiopod on cobble (frame 315)**



**Figure 7. Sediment bowl, cobble with lid and ruler (frame 316)**



**Figure 8. Brachiopod with ruler (frame 317)**

## Reference-04

- Sipuncula saved for identification
- Silt with some sane; cobble <4 to 5 inches with brachiopods
- Solitary corals. More cobble than Reference -03.
- Macoma shell- not live, Nephtys observed

### Photo Log for Reference-04



Figure 9. Sediment and cobble  
(frame 320)



Figure 10. Close-up photo of cobble (frame 321)



Figure 11. Close-up photo of mud (frame 322)



## Reference-05

- Nephtys alive in sediment during compositing
- Silt with some clay, no cobble

### Photo Log for Reference-05



Figure 12. Mud/mixture photo (frame 318)



Figure 13. Mixing sediment (frame 319)

**Photo Log for Compositing Reference Sediments (Note coloration differences)**



**Figure 14A/B. Color differences between Ref 05 and Ref 03 (B is close-up of A; Ref 05 top layer; frames 323, 324)**



**Figure 15. Top layer is Ref-04 (same color and character as Ref-03); mid layer is Ref-05; bottom layer is Ref- 03 (frame 325)**