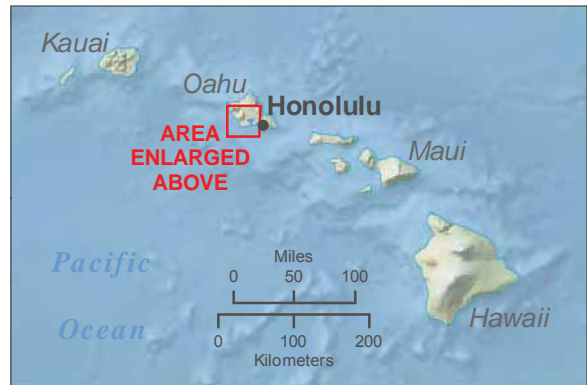


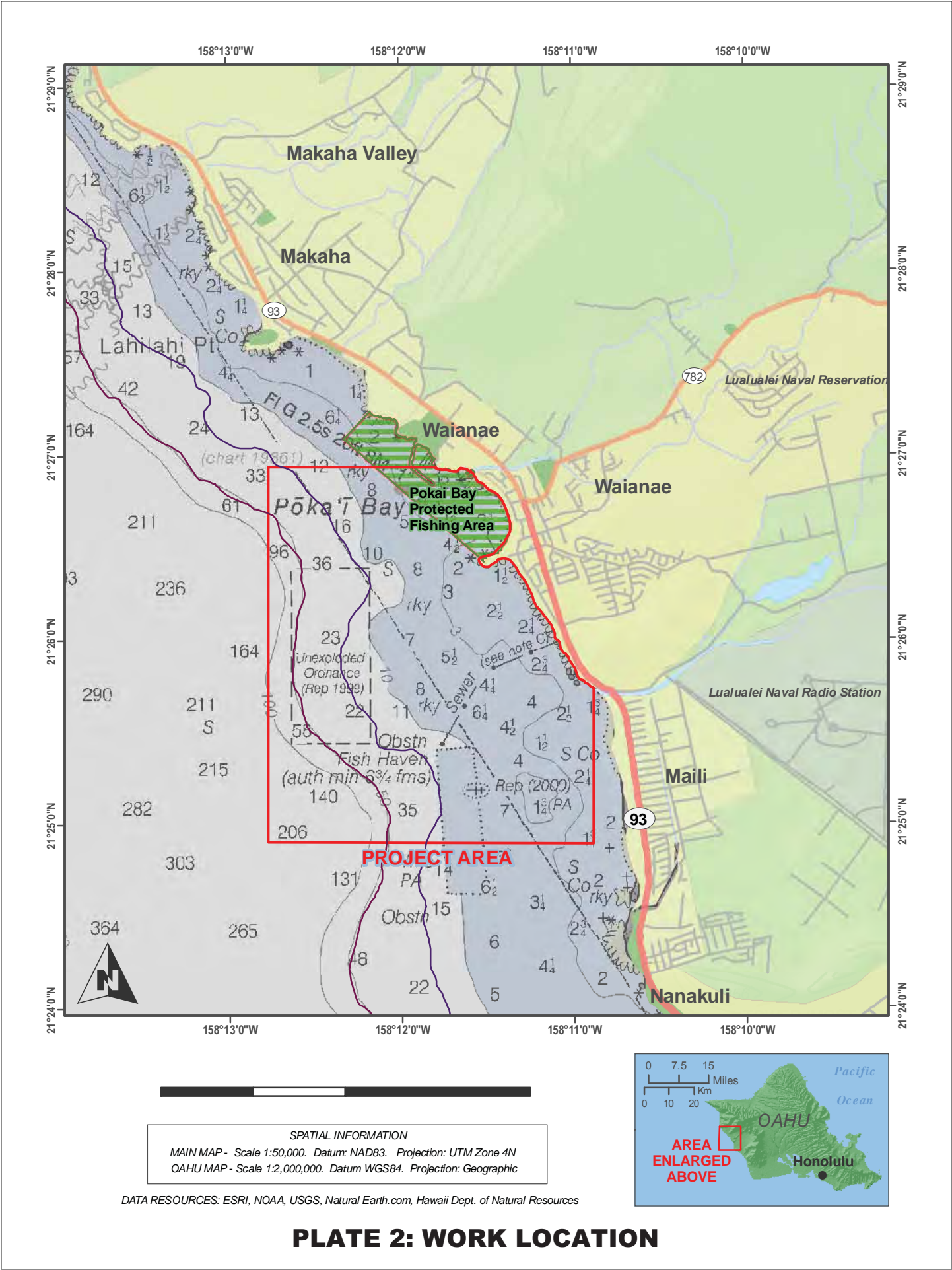
Appendix A



SPATIAL INFORMATION
 MAIN MAP - Scale 1:250,000. Datum: NAD83. Projection: UTM Zone 4N
 HAWAII MAP - Scale 1:10,000,000. Datum: WGS84. Projection: Geographic
 WORLD MAP - Scale 1:750,000,000. Datum: WGS84. Projection: Geographic

DATA RESOURCES: ESRI, NOAA, USGS, Natural Earth.com

PLATE 1: SITE LOCATION



SPATIAL INFORMATION
 MAIN MAP - Scale 1:50,000. Datum: NAD83. Projection: UTM Zone 4N
 OAHU MAP - Scale 1:2,000,000. Datum: WGS84. Projection: Geographic

DATA RESOURCES: ESRI, NOAA, USGS, Natural Earth.com, Hawaii Dept. of Natural Resources

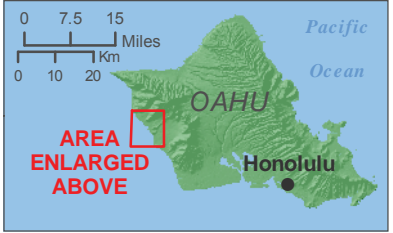


PLATE 2: WORK LOCATION

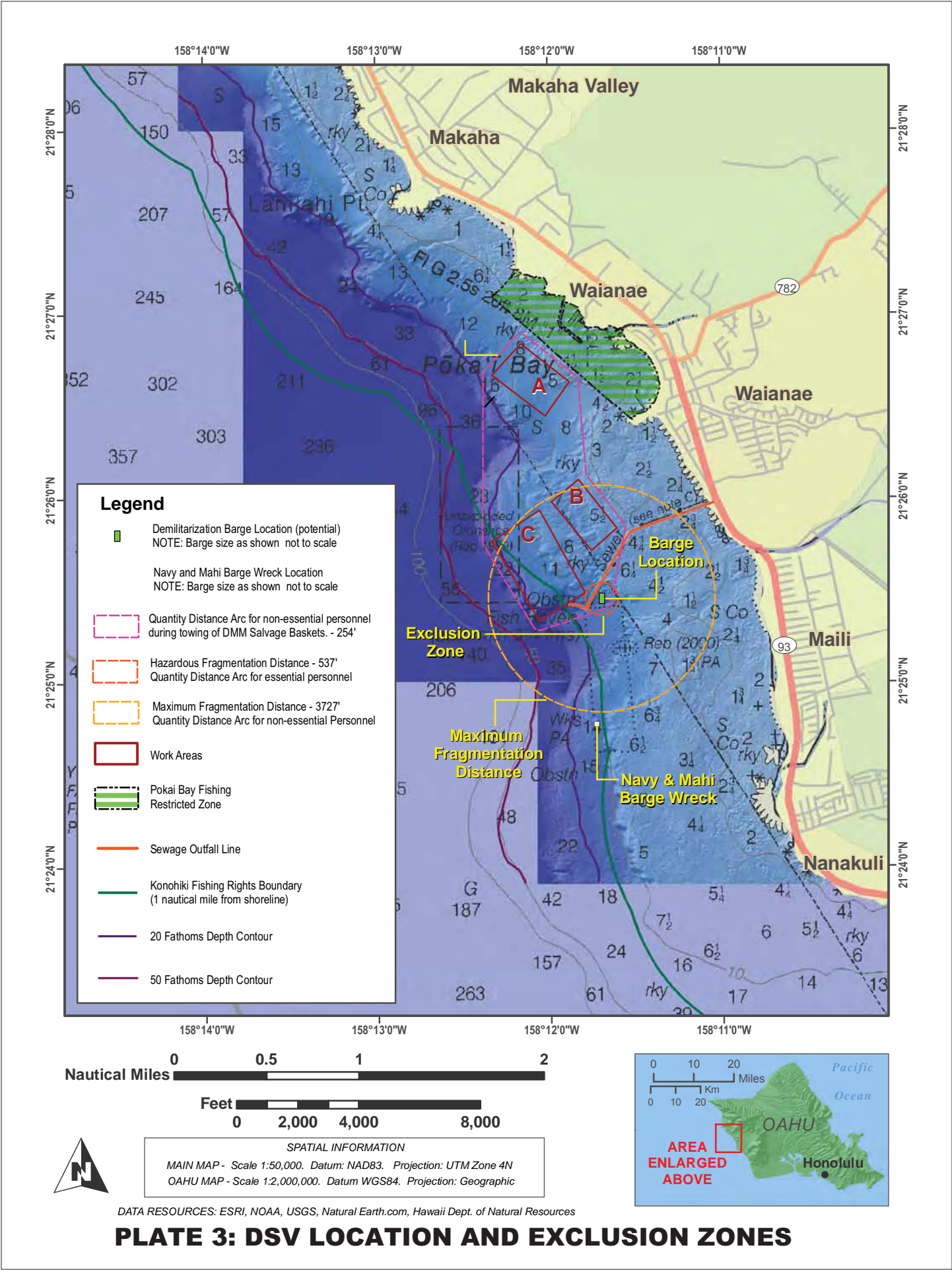


PLATE 3: DSV LOCATION AND EXCLUSION ZONES

Appendix B

Ordnance Reef (HI-06) Munition Tracking Sheet

3-5-42	Recovery		Initials	Notes
	Date	7/29/11	<i>[Signature]</i>	
3-5-43	Item ID Number	42- 44 53		
	Preliminary Item Classification	5" AP		
3-5-44	Collection Time	7/27/11		
3-5-45	Recovery Basket #	3		
3-5-46	Location	120V		
3-5-47	Classification		Initials	Notes
	Date	7/29/11	<i>[Signature]</i>	
	Final Item Classification	5" AP		
	X-Ray Results (Liquid filled Y/N)	NO		
3-5-48	Robotic Cutting		Initials	Notes
3-5-49	Date	7/29/11	<i>[Signature]</i>	
3-5-50	Cutting Batch #	1		
3-5-51	Time Cutting Finished	1150		
	Both halves Marked (A/B)	NO		
3-5-52	Thermal Destruction		Initials	Notes
3-5-53	Date	7/29/11	<i>[Signature]</i>	
	Baking Batch #	1		
	Start RCBO Time	1114		
	RCBO Off Time			
	RCBO Ovens Time	-		
	Item Disposition (Clean/Reheat)	CLEAN		
	Final Disposition		Initials	Notes
	Date	7/29/11	<i>[Signature]</i>	
	Item Examined	yes	<i>[Signature]</i>	
	DoD MDAS Form Completed	yes	<i>[Signature]</i>	
	Item Stowed for Disposal	yes	<i>[Signature]</i>	

* 3-5-42 GIVEN TO SPAWAR

Item Tracking Sheet

Recovery	Date	Initials	Notes
Date	7/18/11	[Signature]	AN-M 30 100/16 GP 57 lbs OF 50/50 TNT/AMOTOL UNFUZED SINGLE LOG (NAVY) 36" x 8.2
Item ID Number	001		
Preliminary Item Classification	BOMB		
Collection Time	1130		
Recovery Basket #	7		
Location	SEE HUKI PAU		
Classification	Date	Initials	Notes
Date	7/18/11	[Signature]	
Final Item Classification	AN-M 30 100/16		
X-Ray Results (Liquid filled Y/N)	()		
Robotic Cutting	Date	Initials	Notes
Date	7/18/11	[Signature]	NOT MARKED SMALL PIECES AND LOOSE EXPLOSIVES
Cutting Batch #	1		
Time Cutting Finished	1400		
Both halves Marked (A/B)	4 PIECES		
Thermal Destruction	Date	Initials	Notes
Date	7/18/11	[Signature]	
Baking Batch #	1		
Start RCBO Time	1400		
RCBO Off Time	1720		
RCBO Ovens Time	180 MIN		
Item Disposition (Clean/Reheat)	CLEAN		
Final Disposition	Date	Initials	Notes
Date	7/18/11	[Signature]	LOOSE PIECES TURNED OVER TO NORTH CAROLINA SEE SPANER
Item Examined	1730	[Signature]	
DoD MDAS Form Completed	1800	[Signature]	
Item Stowed for Disposal	N/A	[Signature]	

ITEM ID #

Item Tracking Sheet

Recovery

Initials

Notes

ITEMS
07-5-02
07-5-03
07-5-04
07-5-05

Date 20 Jul 11
Item ID Number ~~002-005~~
Preliminary Item Classification 5"
Collection Time 7/18/11 12:00
Recovery Basket #
Location SEC ROV

[Signature]

5", 2ND ITEM
RUN THROUGH
CUTTING/HEATING
4-5" INCH
ROUNDS

Classification

Initials

Notes

Date 20 Jul 11
Final Item Classification MK 31 MOD 5
X-Ray Results (Liquid filled Y/N) NO

[Signature]

MODS 1-11
ARE THE SAME

Robotic Cutting

Initials

Notes

Date 7/19/11
Cutting Batch # 002
Time Cutting Finished 1710
Both halves Marked (A/B) NO

[Signature]

MULTIPLE PIECES

Thermal Destruction

Initials

Notes

Date 7/20/11
Baking Batch # 003
Start RCBO Time 0745
RCBO Off Time 1320
RCBO Ovens Time
Item Disposition (Clean/Reheat) CLEAN

[Signature]

Final Disposition

Initials

Notes

Date 7/20/11
Item Examined 1400
DoD MDAS Form Completed *[Signature]*
Item Stowed for Disposal VIEW TO CORROSION

[Signature]
[Signature]
[Signature]
[Signature]

SCRAP RECEIVED
BY BILL WYDIE

Item Tracking Sheet

Recovery		Initials	Notes
3-5-06	Date	7/21/11	PROCESSED 5-5" ROUNDS
3-5-07	Item ID Number	3-5-06 - 3-5-10	
	Preliminary Item Classification	5" AP	
3-5-08	Collection Time	0845	
3-5-09	Recovery Basket #	03	
3-5-10	Location	SEEROV	
Classification		Initials	Notes
	Date	7/21/11	
	Final Item Classification	5" MK-46	
	X-Ray Results (Liquid filled Y/N)	NO	
Robotic Cutting		Initials	Notes
	Date	7/21/11	* MULTIPLE PIECES
	Cutting Batch #	3	
	Time Cutting Finished	1400	
	Both halves Marked (A/B)	NO *	
Thermal Destruction		Initials	Notes
	Date	7/21/11	
	Baking Batch #	6-10	
	Start RCBO Time	0815	
	RCBO Off Time	1400	
	RCBO Ovens Time		
	Item Disposition (Clean/Reheat)	CLEAN	
Final Disposition		Initials	Notes
	Date	7/21/11	ALL ITEMS STORED ON BOMED BARGE
	Item Examined	yes	
	DoD MDAS Form Completed	yes	
	Item Stowed for Disposal	yes	

5" AP

Item Tracking Sheet

Recovery		Initials	Notes
3-5-11	Date	7/22/11	
3-5-12	Item ID Number	3-5-11 = 3-5-13	
	Preliminary Item Classification	5" AP	
3-5-13	Collection Time	7/20/11	
	Recovery Basket #	3	
	Location	SEE ROV	
Classification		Initials	Notes
	Date	7/22/11	
	Final Item Classification	5" AP	
	X-Ray Results (Liquid filled Y/N)	NO	
Robotic Cutting		Initials	Notes
	Date	7/22/11	
	Cutting Batch #		
	Time Cutting Finished	14000885	
	Both halves Marked (A/B)	NO	MULTIPLE PIECES MINUS BASE PLATE
Thermal Destruction		Initials	Notes
	Date	7/22/11	
	Baking Batch #	1	
	Start RCBO Time	1001	
	RCBO Off Time	1400	
	RCBO Ovens Time		
	Item Disposition (Clean/Reheat)	CLEAN	
Final Disposition		Initials	Notes
	Date	7/22/11	
	Item Examined	yes	
	DoD MDAS Form Completed	yes	
	Item Stowed for Disposal	yes	
			ITEMS STORED IN SECURE 55 GAL DRUM

Item Tracking Sheet

Recovery		Initials	Notes	
6-50-14	Date	7/24/11	80-.50 CAL GIVEN TO CORROSION	
Item ID Number	.50 CAL	[Signature]		
Preliminary Item Classification	.50 CAL			
Collection Time	7/23/1500			
Recovery Basket #	6			
Location	ROV			
Classification		Initials	Notes	
	Date	7/24/11		
Final Item Classification	.50 CAL	[Signature]		
X-Ray Results (Liquid filled Y/N)	NO			
Robotic Cutting			Initials	Notes
	Date	[Signature]		
Cutting Batch #	N/A	[Signature]		
Time Cutting Finished	N/A			
Both halves Marked (A/B)	N/A			
Thermal Destruction			Initials	Notes
	Date	7/24/11		
Baking Batch #	1	[Signature]		
Start RCBO Time	0910			
RCBO Off Time	1345			
RCBO Ovens Time				
Item Disposition (Clean/Reheat)	SCAN			
Final Disposition				Initials
	Date		7/24/11	
Item Examined	LP	[Signature]		
DoD MDAS Form Completed	yes			
Item Stowed for Disposal	yes			

Item Tracking Sheet

6-50-15

Recovery	Date	Initials	Notes
Item ID Number	7/24/11	[Signature]	500 - .50 CAL
Preliminary Item Classification	50 CAL (500)		INTACT / PIECES
Collection Time	.50 CAL		
Recovery Basket #	7/23/1500		
Location	6		
	SEE ROV		

Classification	Date	Initials	Notes
Final Item Classification	7/24/11	[Signature]	
X-Ray Results (Liquid filled Y/N)	.50 CAL		
	NO		

Robotic Cutting	Date	Initials	Notes
Cutting Batch #		[Signature]	
Time Cutting Finished	N/A		
Both halves Marked (A/B)			

Thermal Destruction	Date	Initials	Notes
Baking Batch #	7/24/11	[Signature]	
Start RCBO Time	1		
RCBO Off Time	0910		
RCBO Ovens Time	1345		
Item Disposition (Clean/Reheat)			CLEAN

Final Disposition	Date	Initials	Notes
Item Examined	7/24/11	[Signature]	
DoD MDAS Form Completed	yes	[Signature]	
Item Stowed for Disposal	yes	[Signature]	

Item Tracking Sheet

Recovery		Date	Initials	Notes
6-5-16	Date	7/25/11	<i>[Signature]</i>	
6-5-17	Item ID Number	7/23/11		
6-5-18	Preliminary Item Classification	6-5-6 → 6-5-24		
6-5-19	Collection Time	5"		
6-5-20	Recovery Basket #	07/23/11		
6-5-21	Location	6		
6-5-22	Location	ROV		
Classification		Date	Initials	Notes
6-5-23	Date	7/25/11	<i>[Signature]</i>	
6-5-24	Final Item Classification	5" AP (7) ILLUM (2)		
	X-Ray Results (Liquid filled Y/N)	NO		
Robotic Cutting		Date	Initials	Notes
	Date	7/25/11	<i>[Signature]</i>	
	Cutting Batch #	1		
	Time Cutting Finished	0910		
	Both halves Marked (A/B)	<input checked="" type="checkbox"/>		
Thermal Destruction		Date	Initials	Notes
	Date	7/25/11	<i>[Signature]</i>	
	Baking Batch #	1010 1		
	Start RCBO Time	1010		
	RCBO Off Time	1510		
	RCBO Ovens Time	—		
	Item Disposition (Clean/Reheat)	CLEAN		
Final Disposition		Date	Initials	Notes
	Date	7/25/11		
	Item Examined	7/25/11		
	DoD MDAS Form Completed	7/25/11		
*	Item Stowed for Disposal	7/25/11		

* 3 5" GIVEN TO SPAWNALS

Ordnance Reef (HI-06) Munition Tracking Sheet

	Recovery	Date	Initials	Notes
6-5-25		7/26/11	<i>[Signature]</i>	
6-5-26	Item ID Number	25-39		
6-5-27	Preliminary Item Classification	5" AP/HE		
6-5-28	Collection Time	ROV		
6-5-29	Recovery Basket #	6		
6-5-30	Location	ROV		
6-5-31				
6-5-32	Classification		Initials	Notes
6-5-33	Date	7/25/11	<i>[Signature]</i>	
6-5-33	Final Item Classification	5" AP/HE		
6-5-34	X-Ray Results (Liquid filled Y/N)	NO		
6-5-35	Robotic Cutting		Initials	Notes
6-5-35	Date	7/25/11	<i>[Signature]</i>	
6-5-36	Cutting Batch #	1		
6-5-36	Time Cutting Finished	0850		
6-5-37	Both halves Marked (A/B)	NO		
6-5-37	Thermal Destruction		Initials	Notes
6-5-38	Date	7/25/11	<i>[Signature]</i>	
6-5-38	Baking Batch #	1		
6-5-39	Start RCBO Time	0900		
6-5-39	RCBO Off Time	1250		
6-5-39	RCBO Ovens Time			
6-5-39	Item Disposition (Clean/Reheat)	CLEAN		
	Final Disposition		Initials	Notes
	Date	7/25/11	<i>[Signature]</i>	
	Item Examined	yes		
	DoD MDAS Form Completed	yes		
	Item Stowed for Disposal	yes		

Item Tracking Sheet

Recovery		Initials	Notes
<p>6-40-40</p> <p>Item ID Number</p> <p>Preliminary Item Classification</p> <p>6-40-41</p> <p>Recovery Basket #</p> <p>Location</p>	<p>Date</p> <p>7/27/11</p> <p>4016 BOMP</p> <p>ROV</p> <p>6</p> <p>ROV</p>	<p style="text-align: center;">[Signature]</p>	<p>ONLY</p> <p>TUBE FROM</p> <p>INSIDE CONT-</p> <p>AINING TNT</p>
Classification		Initials	Notes
<p>Date</p> <p>Final Item Classification</p> <p>X-Ray Results (Liquid filled Y/N)</p>	<p>7/27/11</p> <p>4016 TUBE</p> <p>NO</p>	<p style="text-align: center;">[Signature]</p>	
Robotic Cutting		Initials	Notes
<p>Date</p> <p>Cutting Batch #</p> <p>Time Cutting Finished</p> <p>Both halves Marked (A/B)</p>	<p>N/A</p>	<p style="text-align: center;">[Signature]</p>	
Thermal Destruction		Initials	Notes
<p>Date</p> <p>Baking Batch #</p> <p>Start RCBO Time</p> <p>RCBO Off Time</p> <p>RCBO Ovens Time</p> <p>Item Disposition (Clean/Reheat)</p>	<p>7/27/11</p> <p>0700</p> <p>1040</p> <p>CLEAN</p>	<p style="text-align: center;">[Signature]</p>	
Final Disposition		Initials	Notes
<p>Date</p> <p>Item Examined</p> <p>DoD MDAS Form Completed</p> <p>Item Stowed for Disposal</p>	<p>7/27/11</p> <p>no</p> <p>no</p> <p>yes*</p>	<p style="text-align: center;">[Signature]</p>	<p>* GIVEN TO</p> <p>SPAWA</p>

Ordnance Reef (HI-06) Munition Tracking Sheet

3	3-5-42	Recovery	Date	Initials	Notes
			7/29/11	<i>[Signature]</i>	
	3-5-43	Item ID Number	42- 43 53		
		Preliminary Item Classification	5" AP		
	3-5-44	Collection Time	7/27/11		
	3-5-45	Recovery Basket #	3		
	3-5-46	Location	ROV		
	3-5-47	Classification		Initials	Notes
		Date	7/29/11	<i>[Signature]</i>	
		Final Item Classification	5" AP		
		X-Ray Results (Liquid filled Y/N)	NO		
	3-5-48	Robotic Cutting		Initials	Notes
	3-5-49	Date	7/29/11	<i>[Signature]</i>	
	3-5-50	Cutting Batch #	1		
	3-5-51	Time Cutting Finished	1150		
		Both halves Marked (A/B)	NO		
	3-5-52	Thermal Destruction		Initials	Notes
	3-5-53	Date	7/29/11	<i>[Signature]</i>	
		Baking Batch #	1		
		Start RCBO Time	1114		
		RCBO Off Time			
		RCBO Ovens Time	-		
		Item Disposition (Clean/Reheat)	CLEAN		
		Final Disposition		Initials	Notes
		Date	7/29/11	<i>[Signature]</i>	
		Item Examined	yes	<i>[Signature]</i>	
		DoD MDAS Form Completed	yes	<i>[Signature]</i>	
		Item Stowed for Disposal	yes	<i>[Signature]</i>	

* 3-5-42 GIVEN TO SPAWARC

Ordnance Reef (HI-06) Munition Tracking Sheet

Recovery		Initials	Notes
3-.50-54	Date 7/30/11	<i>[Signature]</i>	1800
Item ID Number			ROUNDS
Preliminary Item Classification	.50 cal (800)		
Collection Time	7/29/11		
Recovery Basket #	3		
Location	ROV		
Classification		Initials	Notes
Date	7/30/11	<i>[Signature]</i>	
Final Item Classification	.50 cal		
X-Ray Results (Liquid filled Y/N)	NO		
Robotic Cutting		Initials	Notes
Date		<i>[Signature]</i>	
Cutting Batch #	N/A		
Time Cutting Finished			
Both halves Marked (A/B)			
Thermal Destruction		Initials	Notes
Date	7/30/11	<i>[Signature]</i>	
Baking Batch #	1		
Start RCBO Time	0840		
RCBO Off Time	12:50		
RCBO Ovens Time			
Item Disposition (Clean/Reheat)	CLEAN		
Final Disposition		Initials	Notes
Date	7/30/11	<i>[Signature]</i>	
Item Examined	yes	<i>[Signature]</i>	
DoD MDAS Form Completed	yes	<i>[Signature]</i>	
Item Stowed for Disposal	yes	<i>[Signature]</i>	

Ordnance Reef (HI-06) Munition Tracking Sheet

6-5-73	Recovery		Initials	Notes
	Date	8/2/11		
6-5-74	Item ID Number	73-81		
	Preliminary Item Classification			
6-5-75	Collection Time			
6-5-76	Recovery Basket #	6		
	Location			
6-5-77				
	Classification		Initials	Notes
6-4-78	Date	8-2-11		
	Final Item Classification			
	X-Ray Results (Liquid filled Y/N)			
6-1.1-79				
	Robotic Cutting		Initials	Notes
6-1.1-80	Date	7/29/11		
6-1.1-81	Cutting Batch #	1		
	Time Cutting Finished	1000		
	Both halves Marked (A/B)			
	Thermal Destruction		Initials	Notes
	Date			
	Baking Batch #			
	Start RCBO Time			
	RCBO Off Time			
	RCBO Ovens Time			
	Item Disposition (Clean/Reheat)			
	Final Disposition		Initials	Notes
	Date			
	Item Examined			
	DoD MDAS Form Completed			
	Item Stowed for Disposal			

Ordnance Reef (HI-06) Munition Tracking Sheet

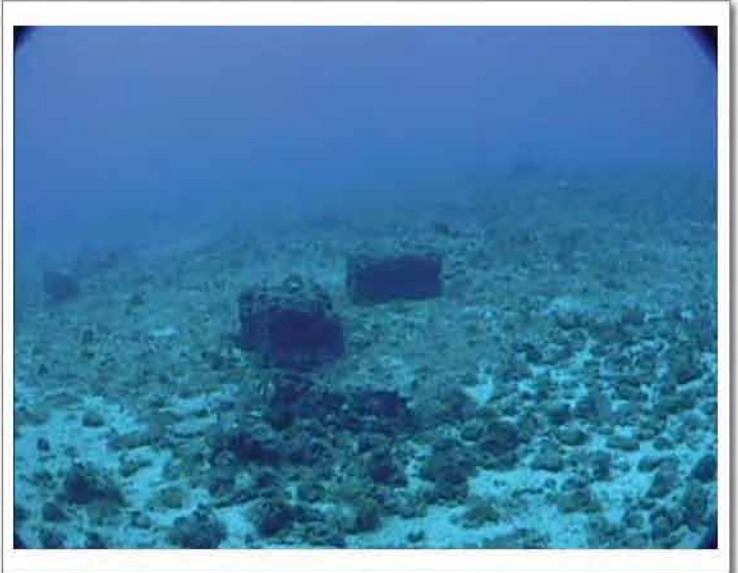
	Recovery	Initials	Notes
6-5-55	Date <u>8/1/11</u>		
	Item ID Number <u>55-72</u>		
	Preliminary Item Classification _____		
6-5-56	Collection Time _____		
	Recovery Basket # <u>6</u>		
6-5-57	Location _____		
6-5-58	Classification	Initials	Notes
6-5-59	Date <u>8-1-11</u>		
	Final Item Classification _____		
	X-Ray Results (Liquid filled Y/N) _____		
6-5-60	Robotic Cutting	Initials	Notes
6-5-61	Date <u>7/29/11</u>		
6-5-62	Cutting Batch # _____		
6-5-63	Time Cutting Finished <u>1000</u>		
	Both halves Marked (A/B) _____		
6-5-64	Thermal Destruction	Initials	Notes
6-5-65	Date _____		
6-5-66	Baking Batch # _____		
6-5-67	Start RCBO Time _____		
6-5-68	RCBO Off Time _____		
	RCBO Ovens Time _____		
	Item Disposition (Clean/Reheat) _____		
6-5-69	Final Disposition	Initials	Notes
6-5-70	Date _____		
6-40-71	Item Examined _____		
6-40-72	DoD MDAS Form Completed _____		
	Item Stowed for Disposal _____		

Appendix C

Appendix D



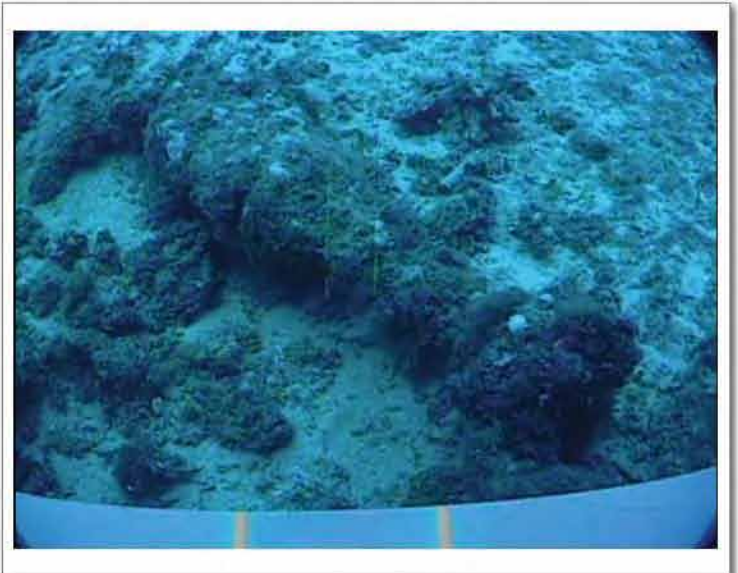
Item 1 Box



Item 3 Boxes



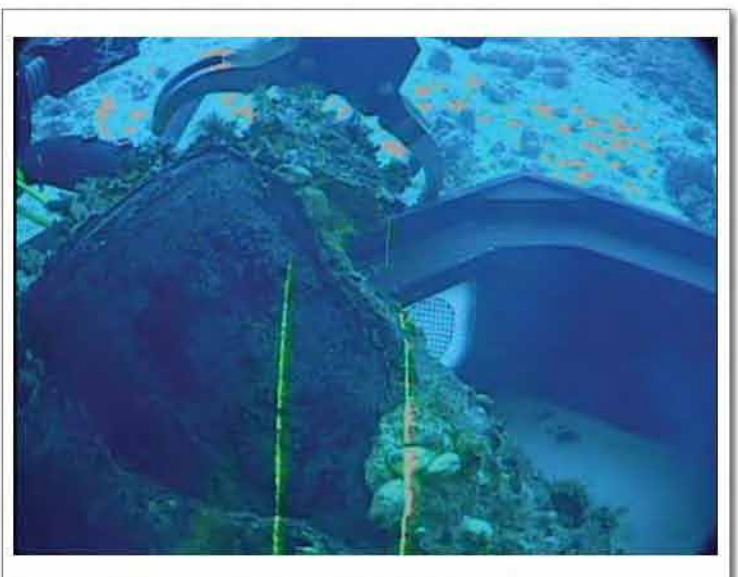
Item 4 Projectile



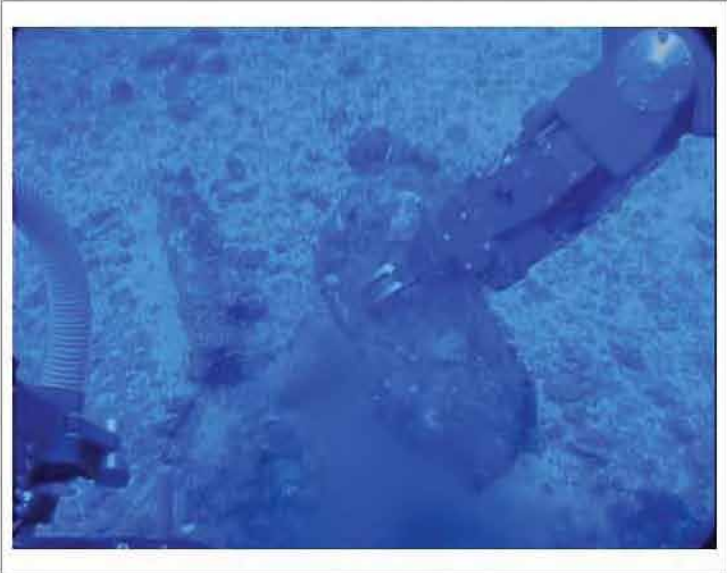
Item 5_1 Projectile



Item 5_2 Projectile



Item 5_3 Projectile



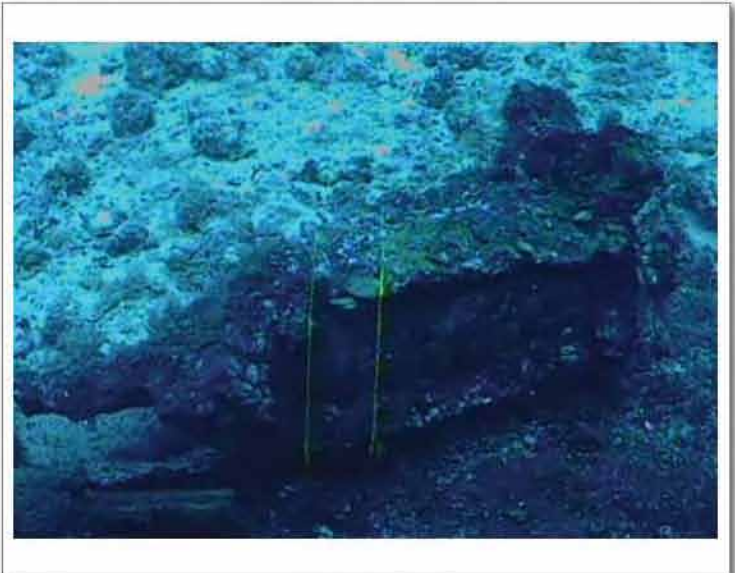
Item 5_4 Projectile



Item 6_1 Projectile



Item 6_2 Projectile



Item 6_3 Projectile



Item 6_4 Projectile



Item 6_5 Projectile



Item 7_1 Projectile



Item 7_2 Projectile



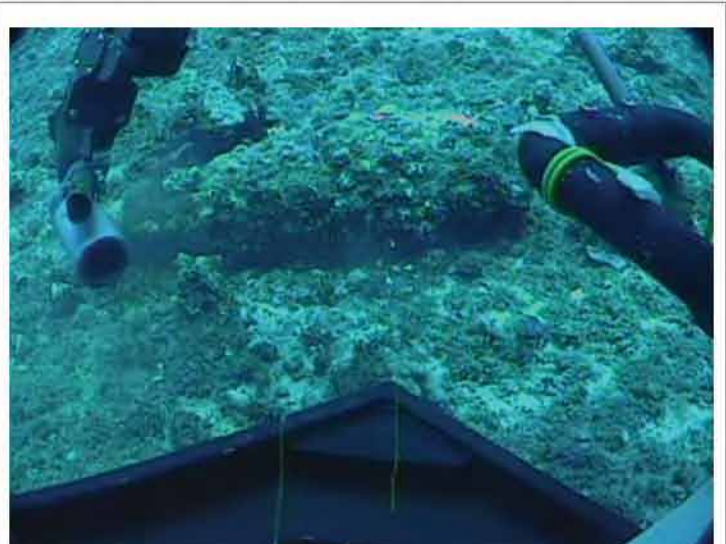
Item 7_3 Projectile



Item 8_1 Projectile



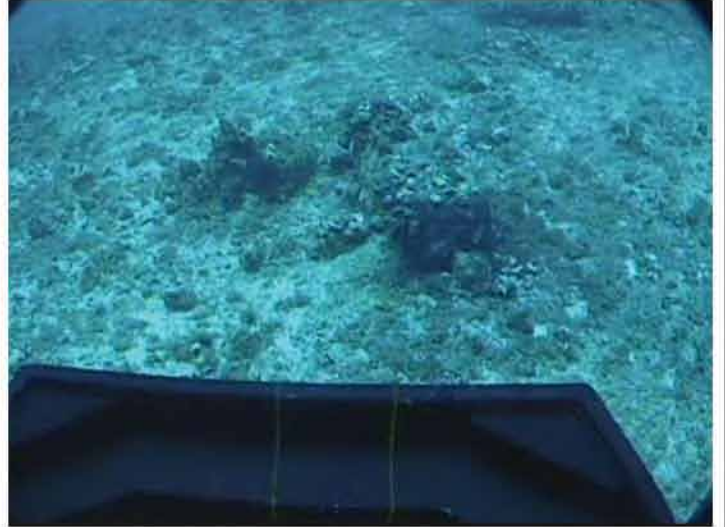
Item 9_1 Projectile



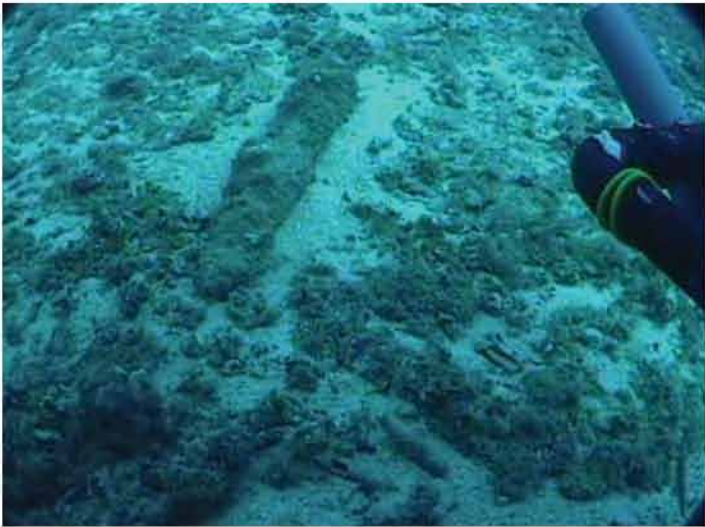
Item 10_1 Projectile



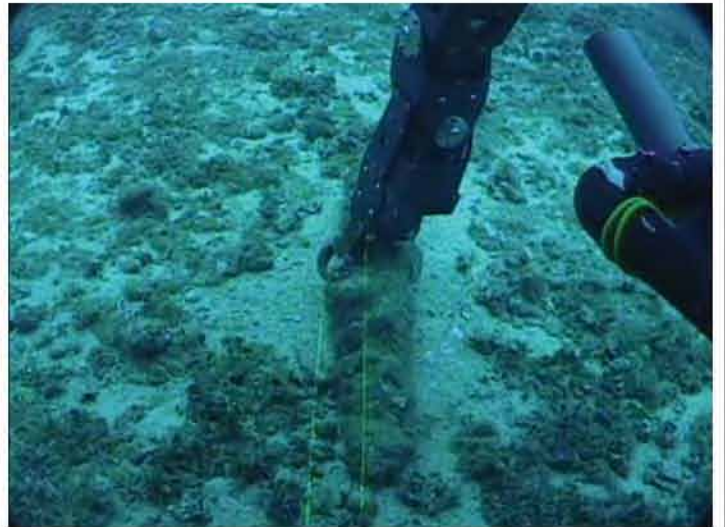
Item 10_2 Projectile



Item 11_1 Projectile



Item 12_1 Projectile



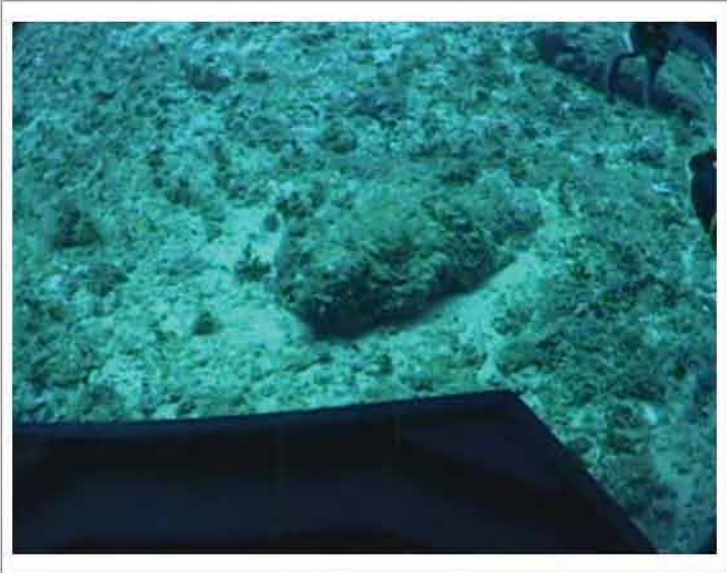
Item 12_2 Projectile



Item 13_1 Projectile



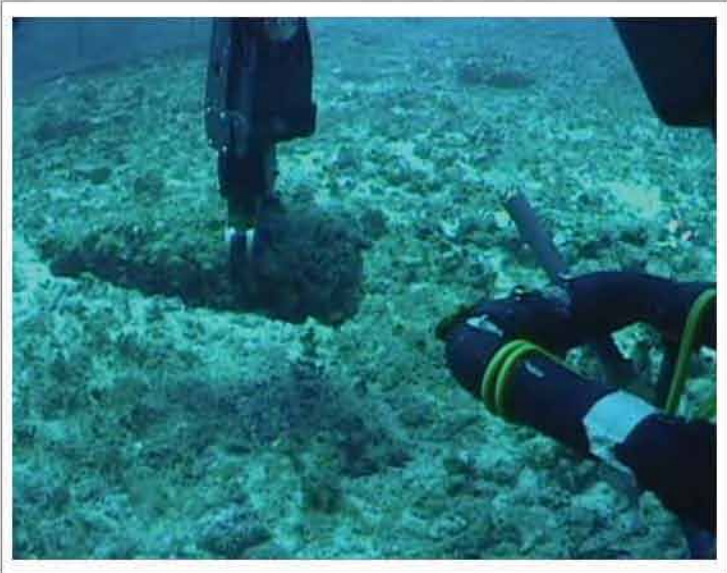
Item 14_1 Projectile



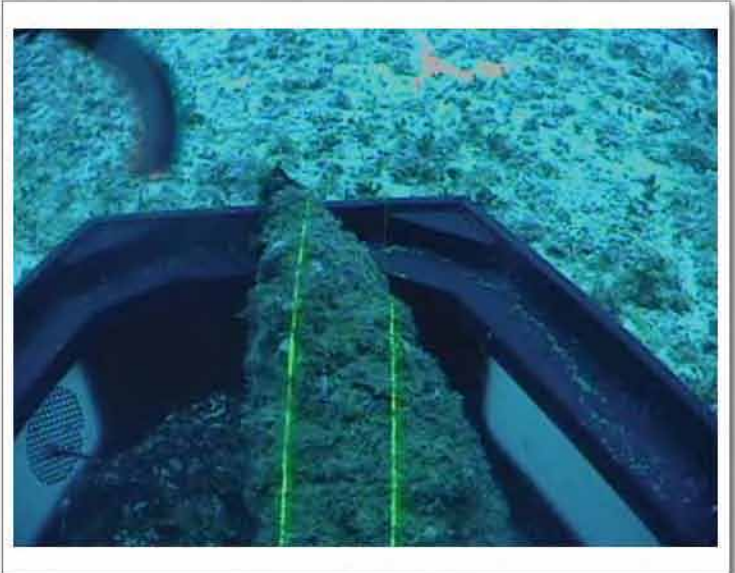
Item 15_1 Projectile



Item 16_1 Projectile



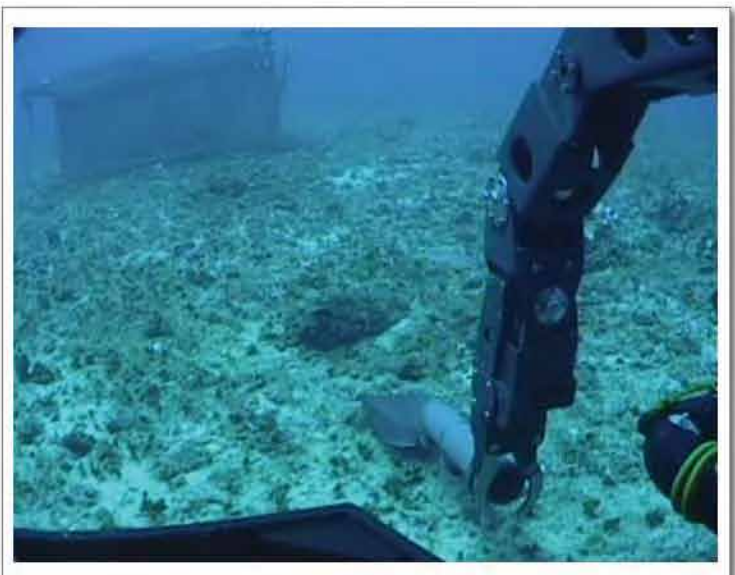
Item 16_2 Projectile



Item 16_3 Projectile



Item 17_1 Projectile



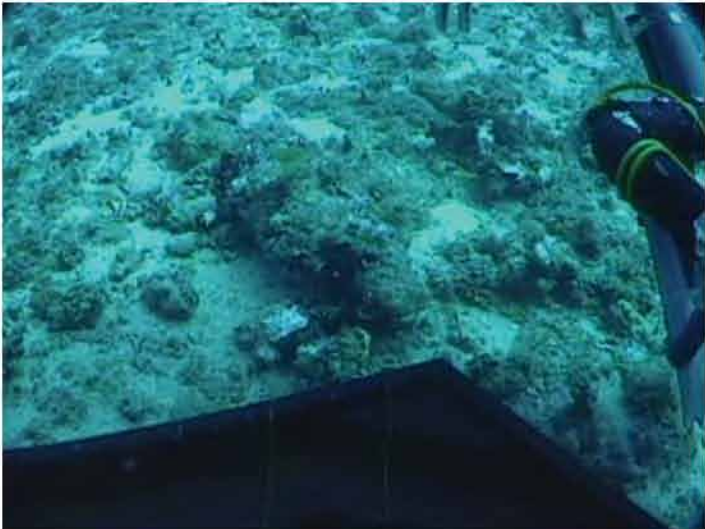
Item 17_2 Projectile



Item 18_1 Projectile



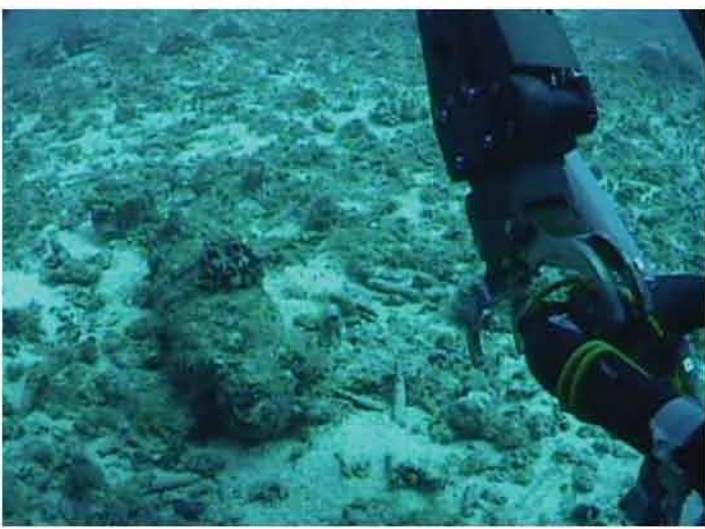
Item 18_2 Projectile



Item 19_1 Projectile



Item 19_2 Projectile



Item 20_1 Projectile



Item 21_1 Projectile



Item 21_2 Projectile



Item 22_1 Small Arms



Item 22_2 Small Arms



Item 23_1 Bomb



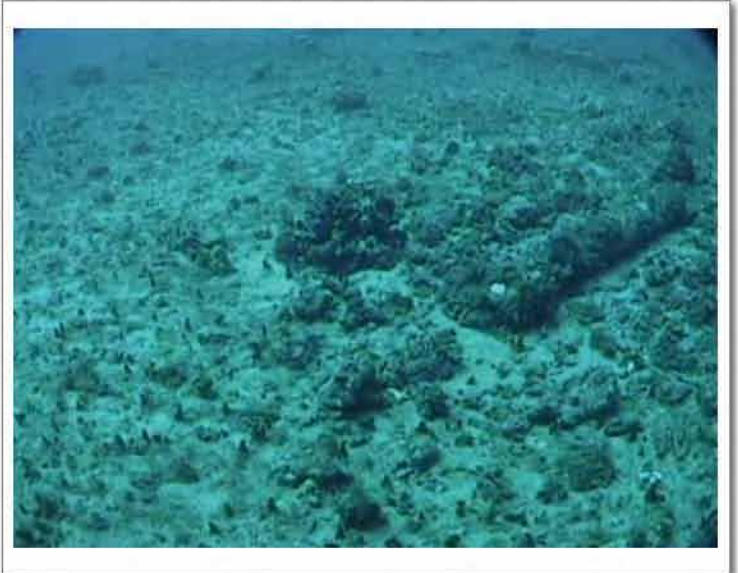
Item 23_2 Bomb



Item 23_3 Bomb



Item 24_1 Coral



Item 25_1 Projectile



Item 25_2 Projectile



Item 26_1 Small Arms



Item 27_1 Small Arms



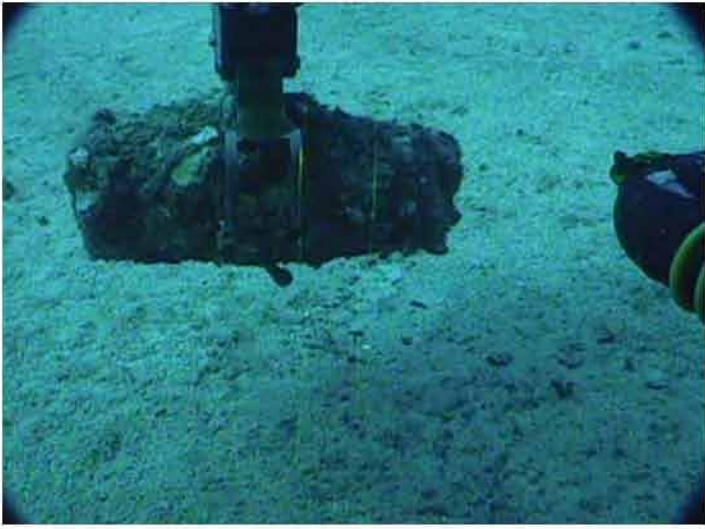
Item 28_1 Small Arms



Item 29_1 Small Arms



Item 30_1 Projectile



Item 30_2 Projectile



Item 31 and 32 2 Projectile



Item 31 and 32 Projectile



Item 33_1 Projectile



Item 33_2 Projectile



Item 34_1 Projectile



Item 34_2 Projectile



Item 35_1 Small Arms



Item 35_2 Small Arms



Item 36_1 Projectile



Item 37 and 38 2 Projectile



Item 37 and 38 Projectile



Item 39_1 Projectile



Item 40_1 Projectile



Item 41_1 Projectile



Item 41_2 Projectile

Draft Final Report Ordnance Reef (HI-06) Technology Demonstration



Item 42_1 Projectile



Item 43_1 Projectile



Item 44_4 Projectile



Item 45 and 46 Projectile



Item 45_2 Projectile



Item 46_2 Projectile

Draft Final Report Ordnance Reef (HI-06) Technology Demonstration



Item 47_1 Projectile



Item 47_2 Projectile



Item 48_1 Projectile



Item 48_2 Projectile



Item 49_1 Projectile



Item 50_1 Projectile



Item 51 and 52 Projectile



Item 52_2 Projectile



Item 53_1 Small Arms



Item 53_2 Small Arms



Item 54_1 Projectile



Item 54_2 Projectile

Draft Final Report Ordnance Reef (HI-06) Technology Demonstration



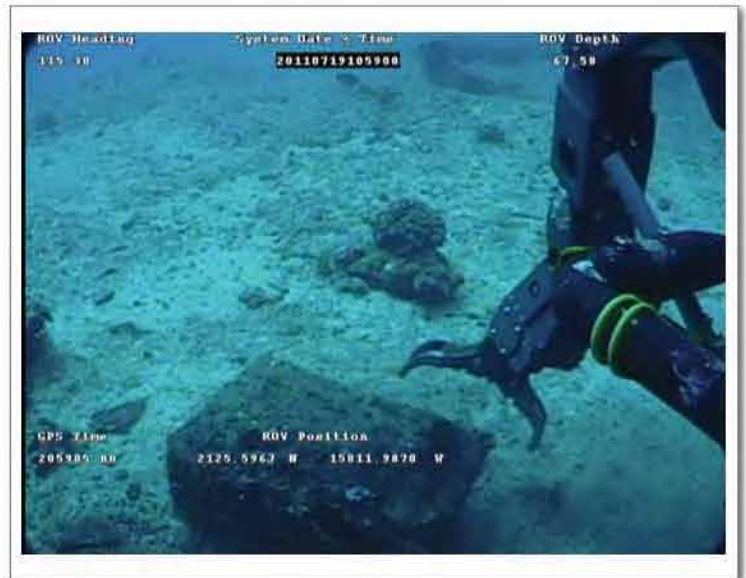
Item 56 and 57 Projectile



Item 58_1 Small Arms



Item 58_2 Small Arms



Item 58_3 Small Arms



Item 59_1 Projectile



Item 59_2 Projectile



Item 60_1 Projectile



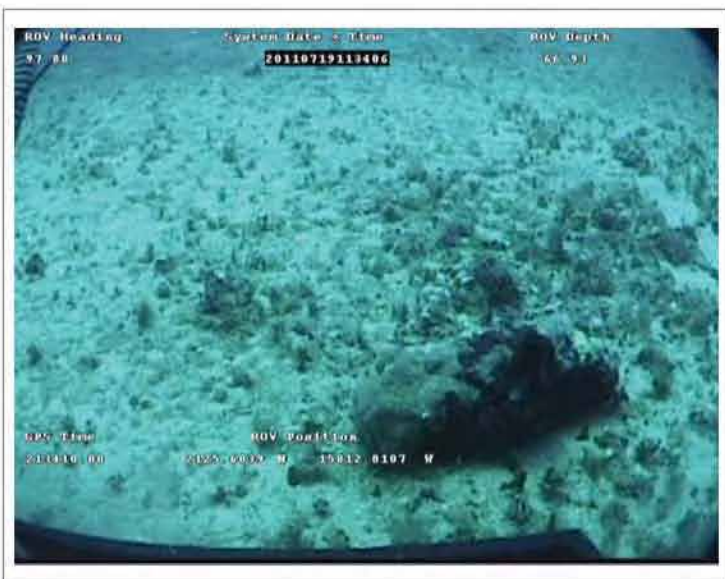
Item 61_1 Projectile



Item 61_2 Projectile



Item 61_3 Projectile



Item 62_1 Projectile



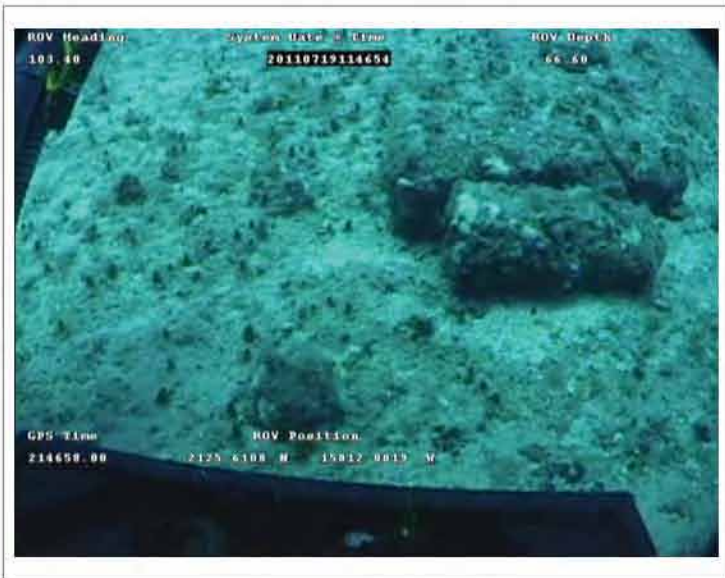
Item 62_2 Projectile



Item 63_1 Projectile



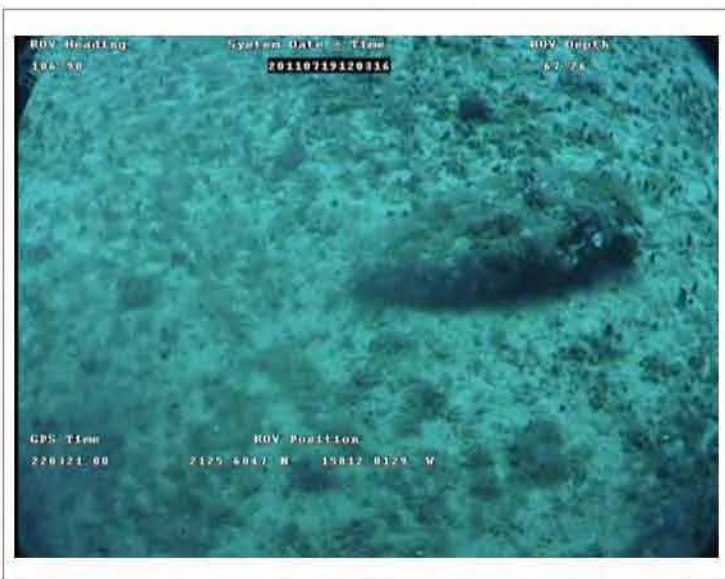
Item 63_2 Projectile



Item 64 and 65 Projectile



Item 64_2 Projectile



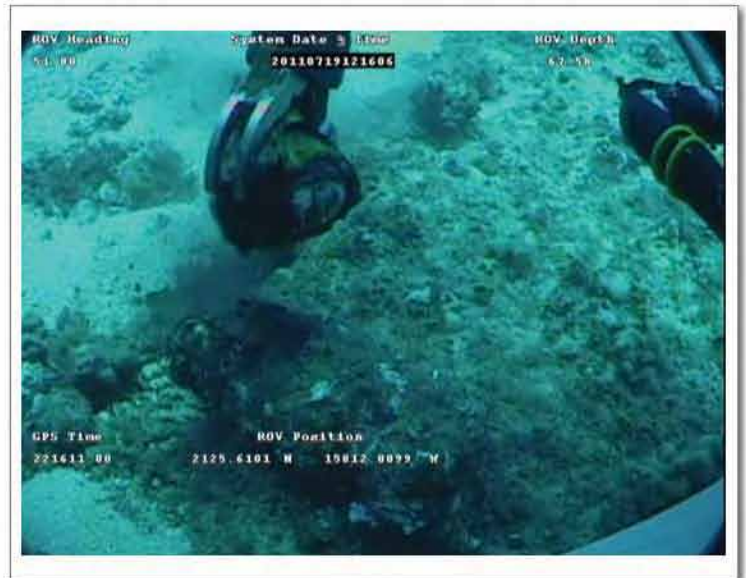
Item 66_1 Projectile



Item 66_2 Projectile



Item 67_1 Projectile



Item 67_2 Projectile



Item 68_1 Projectile



Item 68_2 Projectile



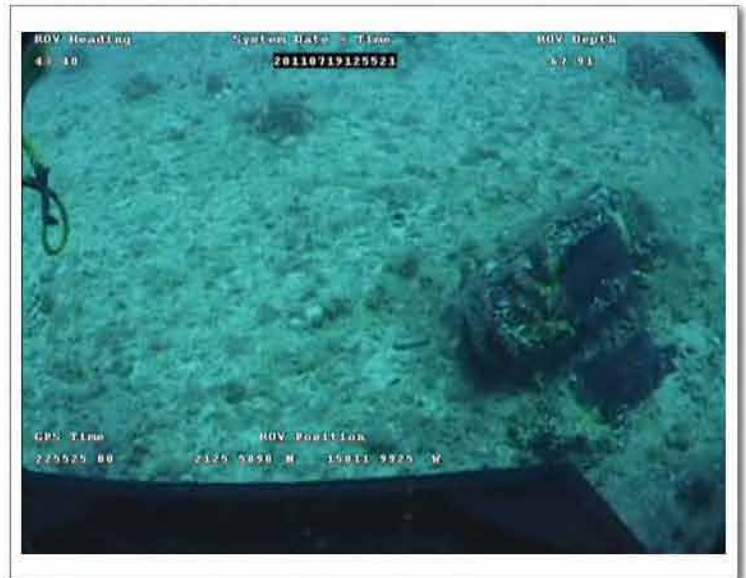
Item 69_1 Projectile



Item 70 and 71 Projectile



Item 70_2 Small Arms



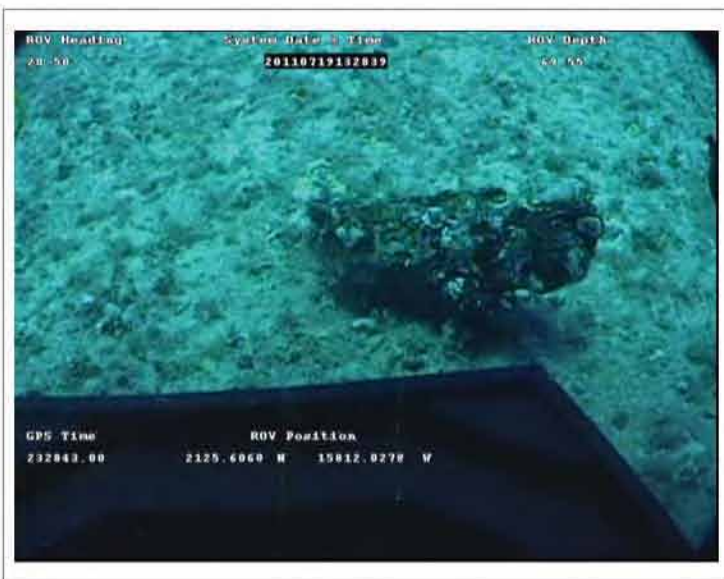
Item 72_1 Projectile



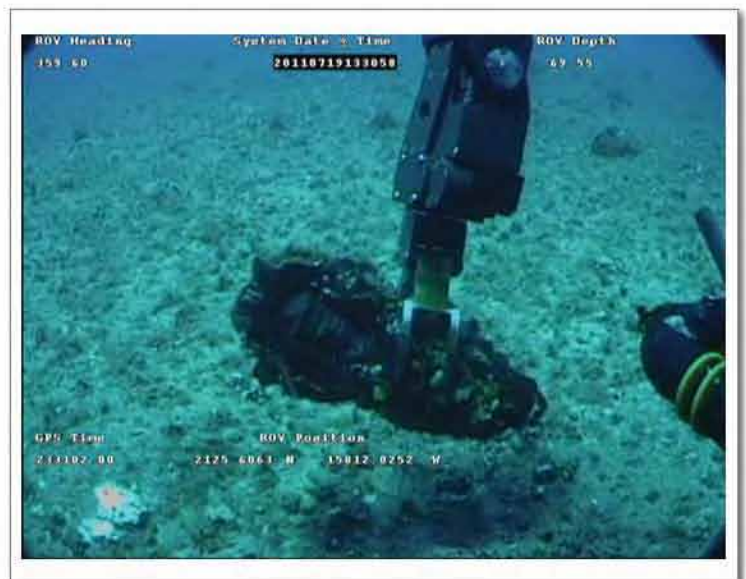
Item 72_2 Projectile



Item 72_3 Projectile



Item 73_1 Projectile



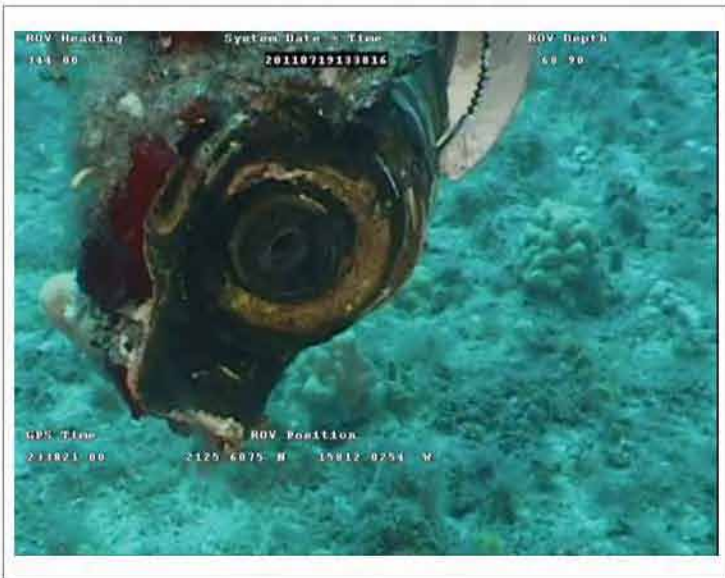
Item 73_2 Projectile



Item 74_1 Frag Bomb



Item 74_2 Frag Bomb



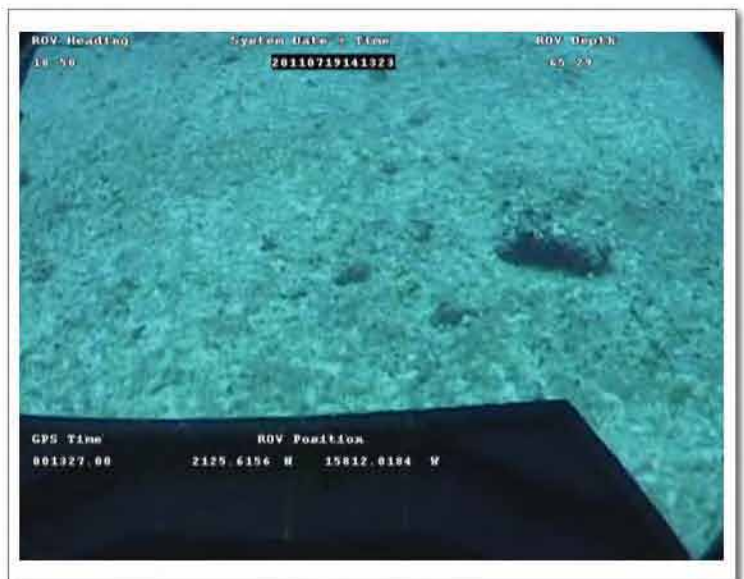
Item 74_3 Frag Bomb



Item 75_1 Projectile



Item 75_2 Projectile



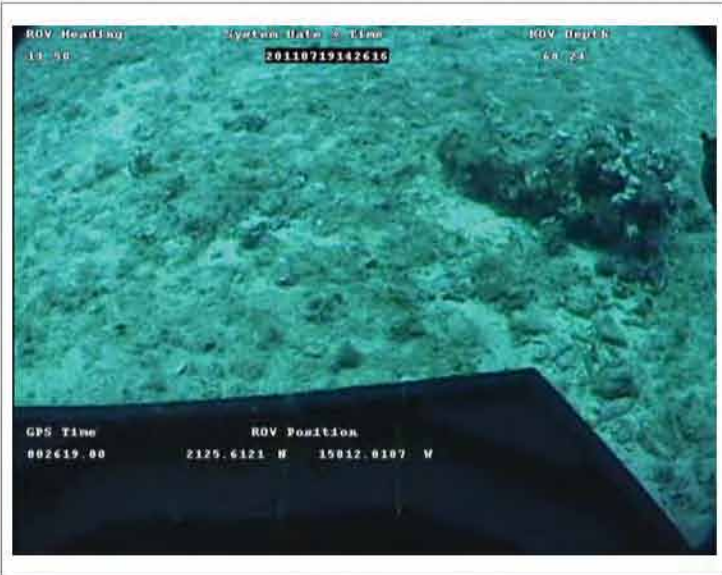
Item 76_1 Projectile



Item 76_2 Projectile



Item 77_1 Projectile



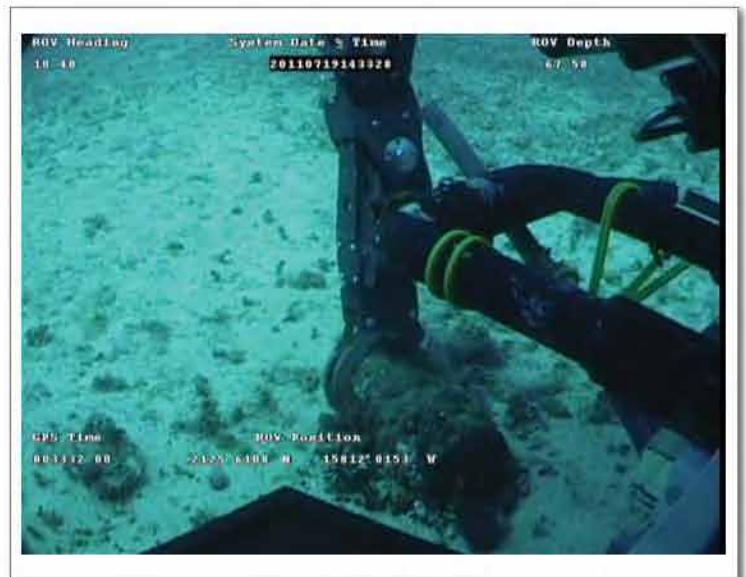
Item 78_1 Projectile



Item 79_1 Projectile



Item 79_2 Projectile



Item 79_3 Projectile



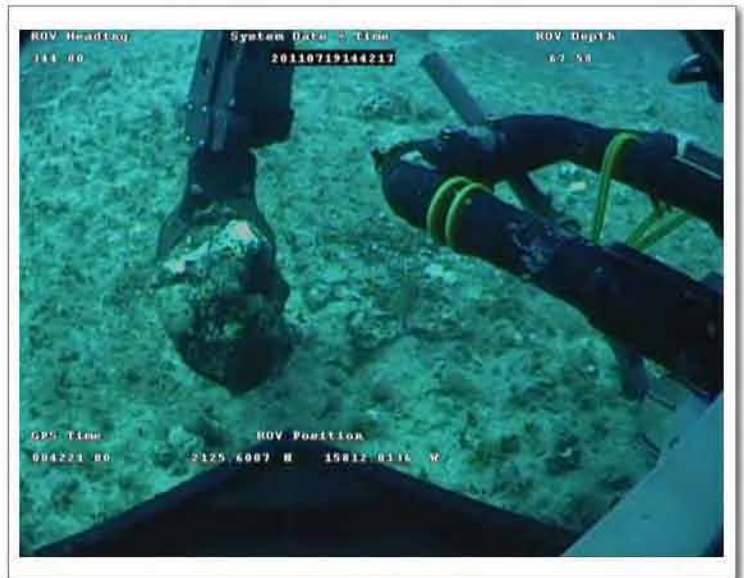
Item 80_1 Projectile



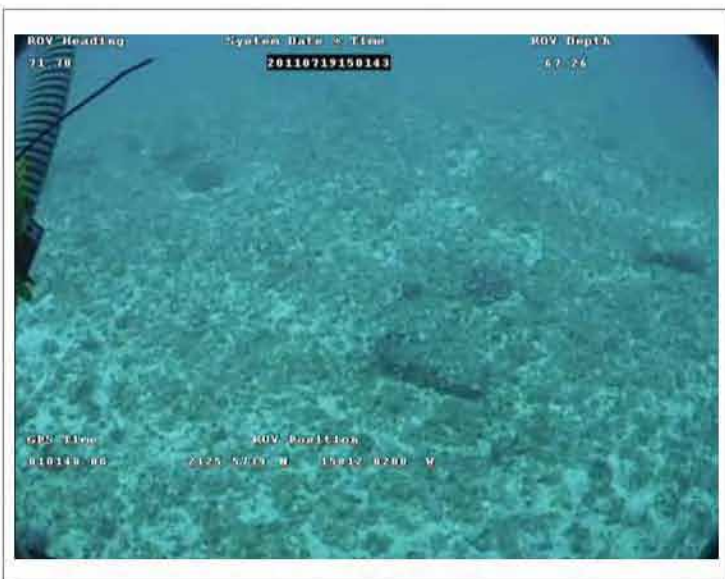
Item 80_2 Projectile



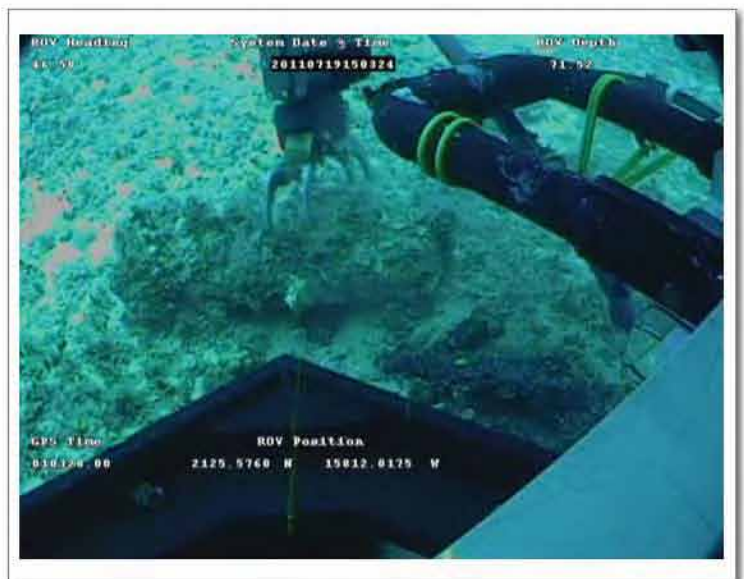
Item 81_1 Projectile



Item 81_2 Projectile



Item 82_1 Projectile



Item 82_2 Projectile

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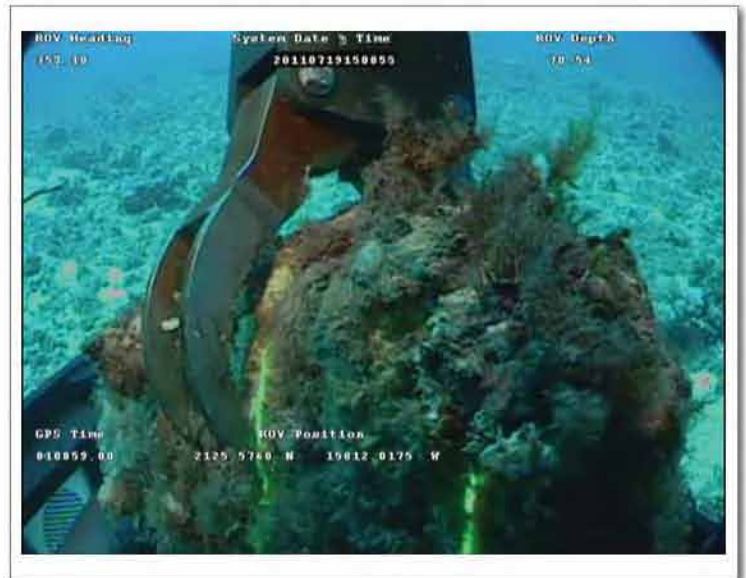
Item 82_3 Projectile



Item 83_1 Projectile



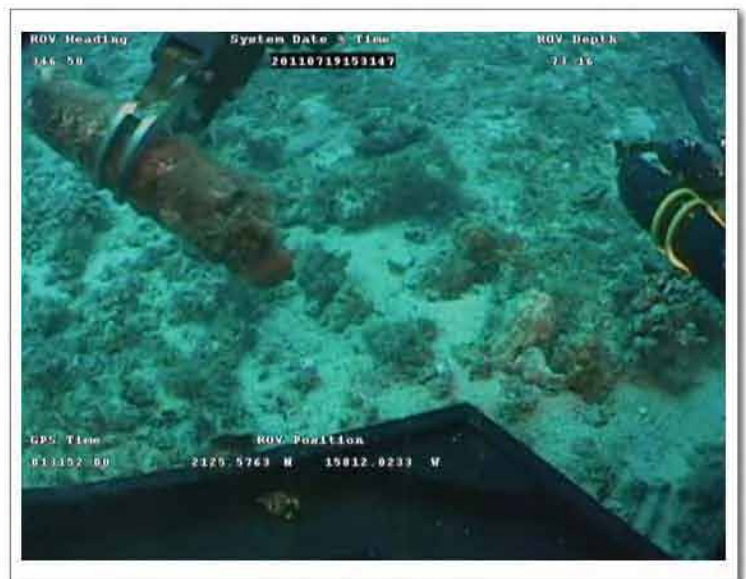
Item 83_2 Projectile



Item 83_3 Projectile



Item 84_1 Projectile



Item 84_2 Projectile



Item 85_1 Projectile



Item 85_2 Projectile



Item 86_1 Projectile



Item 86_2 Projectile



Item 87_1 Projectile



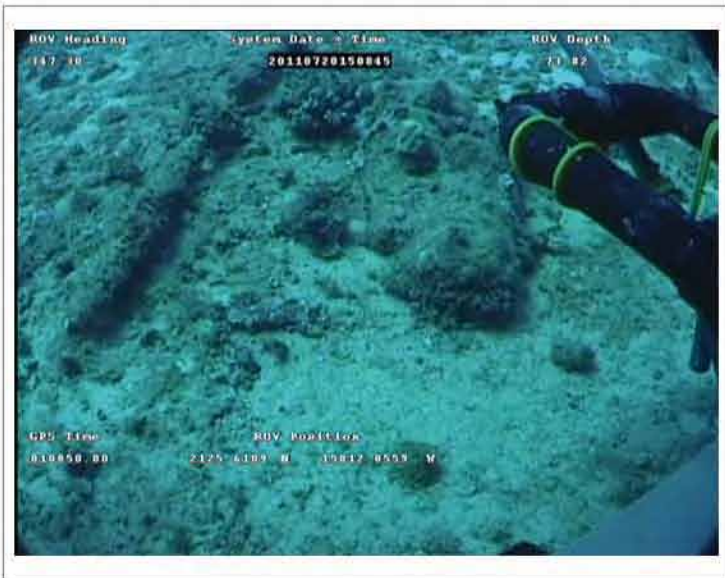
Item 87_2 Projectile



Item 88_1 Projectile



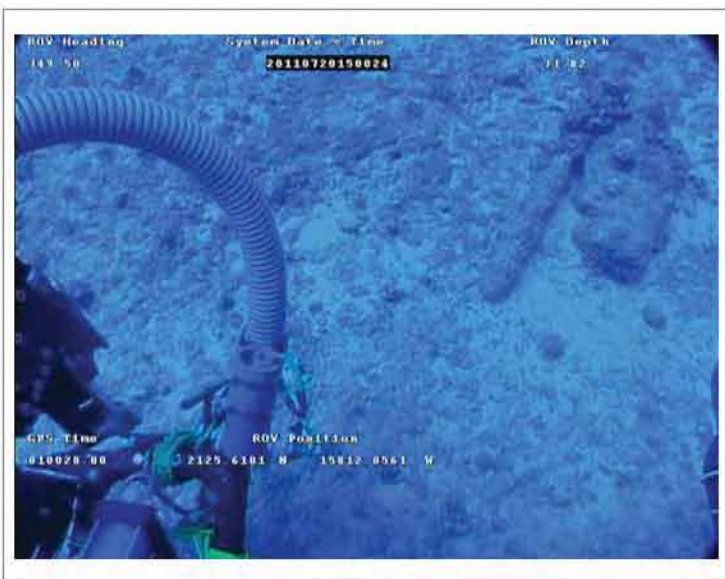
Item 89_2 Projectile



Item 90 and 91 Projectile



Item 90_1 Projectile



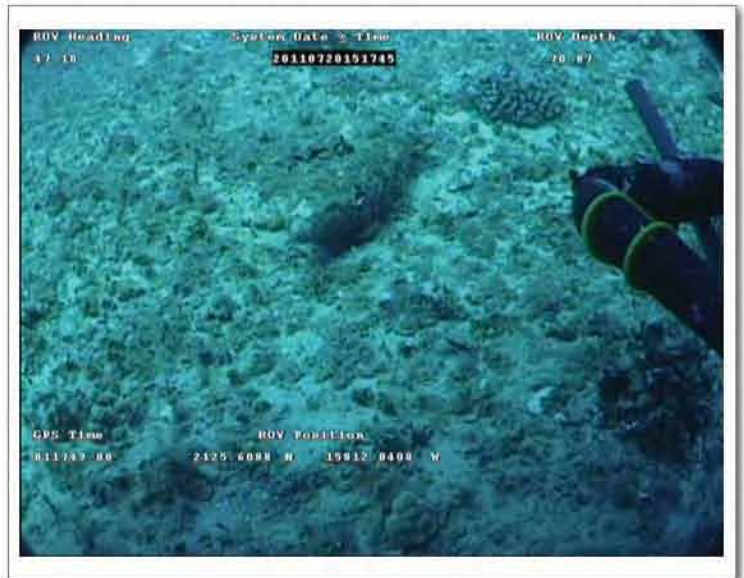
Item 91_1 Projectile



Item 92_1 Projectile



Item 92_2 Projectile



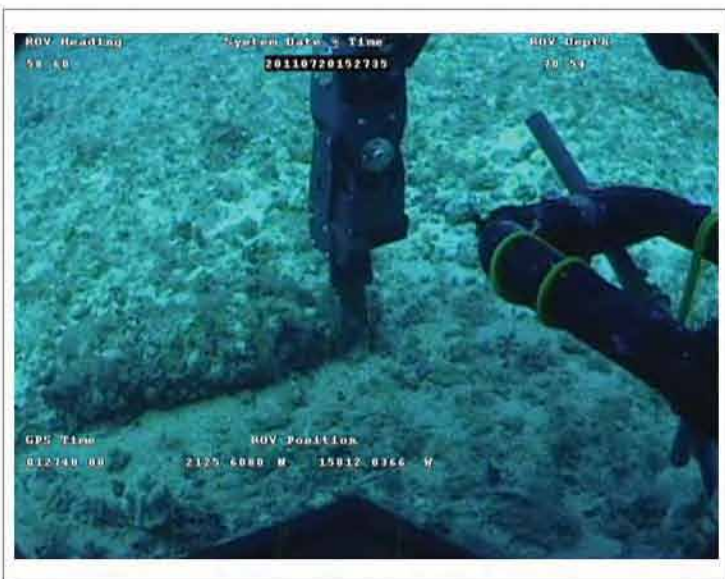
Item 93_1 Projectile



Item 93_2 Projectile



Item 94_1 Projectile



Item 94_2 Projectile



Item 95_1 Projectile



Item 95_2 Projectile



Item 96_1 Projectile



Item 96_2 Projectile



Item 97_1 Projectile



Item 97_2 Projectile

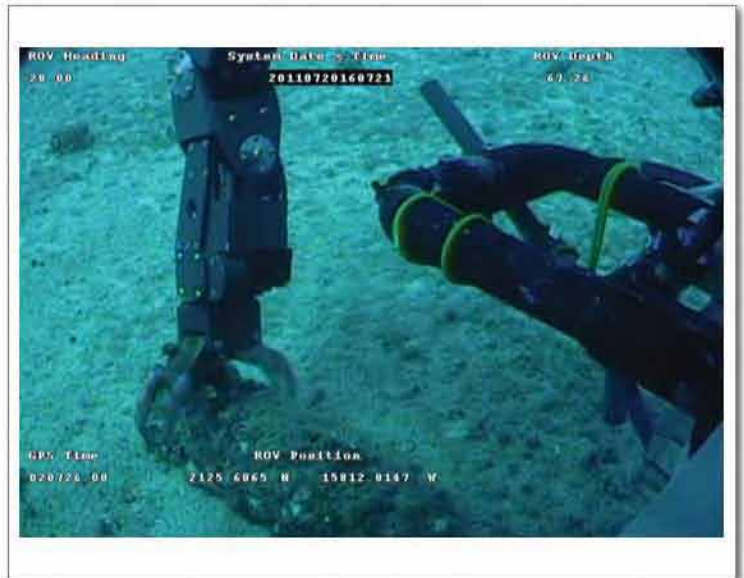


Item 97_3 Projectile

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Item 98_1 Projectile



Item 98_2 Projectile



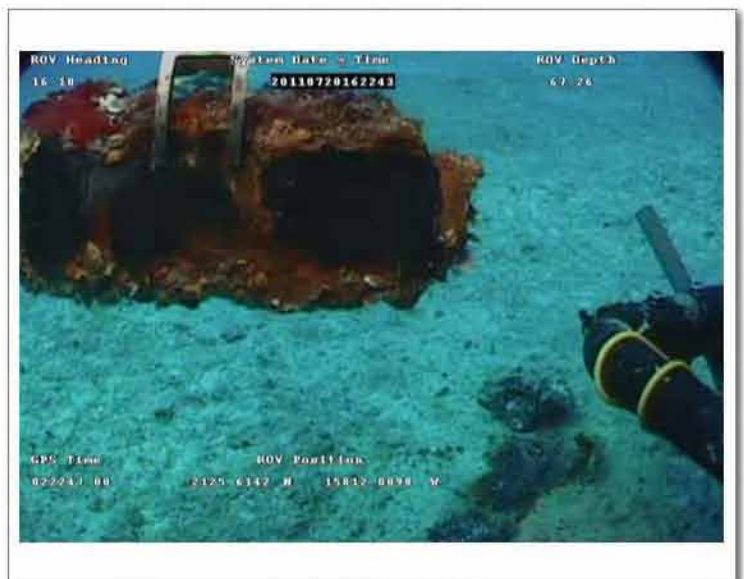
Item 99_1 Projectile



Item 99_2 Projectile



Item 100_1 Projectile

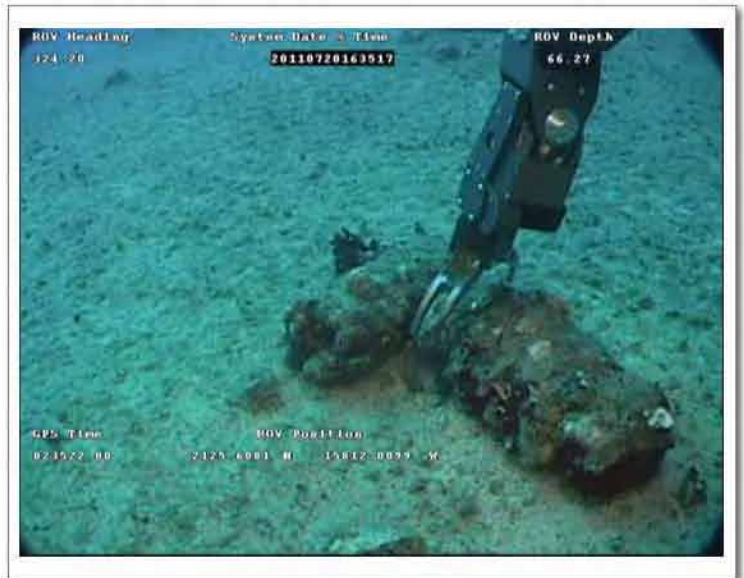


Item 100_2 Projectile

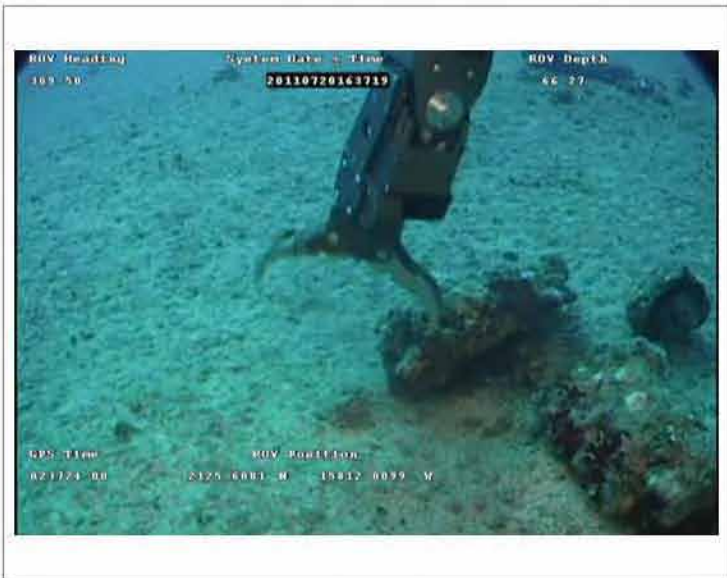
Draft Final Report Ordnance Reef (HI-06) Technology Demonstration



Item 101_1 Projectile



Item 101_2 Projectile



Item 102_2 Projectile



Item 107_1 Small Arms



Item 107_2 Small Arms



Item 108_1 Projectile

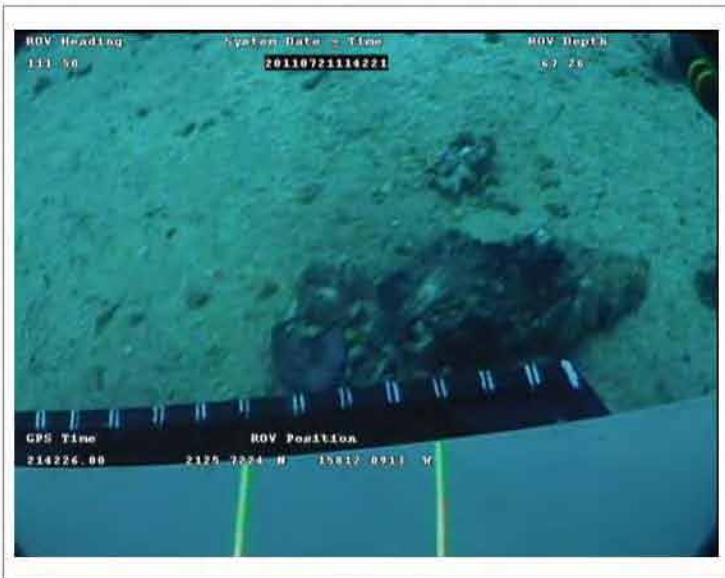
Draft Final Report Ordnance Reef (HI-06) Technology Demonstration



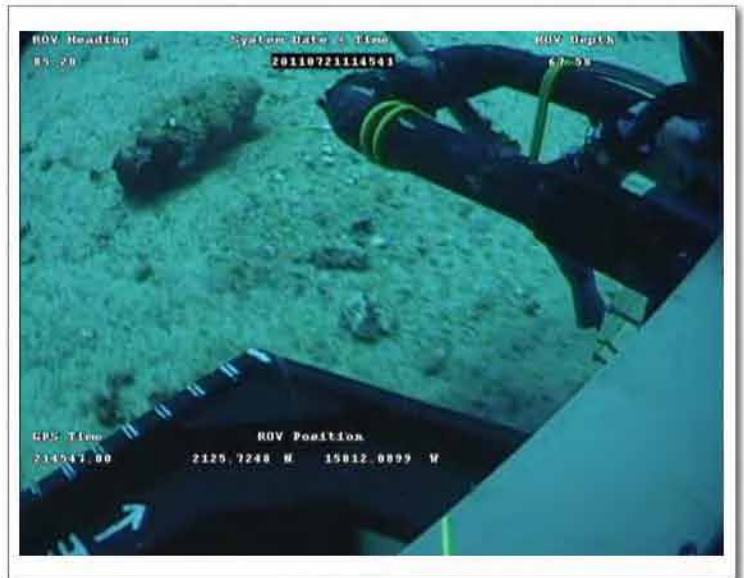
Item 108_2 Projectile



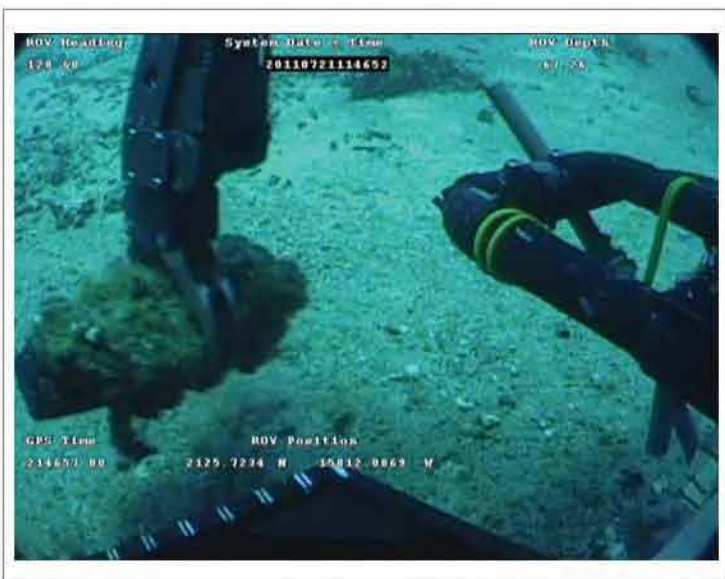
Item 109_1 Projectile



Item 110_1 Projectile



Item 111_1 Projectile



Item 111_2 Projectile



Item 111_3 Projectile

Draft Final Report Ordnance Reef (HI-06) Technology Demonstration



Item 112_1 Small Arms



Item 112_2 Small Arms



Item 113_1 Projectile



Item 113_2 Projectile



Item 114_1 Unknown



Item 114_2 Unknown

Draft Final Report Ordnance Reef (HI-06) Technology Demonstration



Item 115_1 Projectile



Item 115_2 Projectile



Item 116_1 Projectile



Item 116_2 Projectile



Item 116_3 Projectile



Item 118_3 Projectile



Item 119_1 Projectile



Item 119_3 Projectile



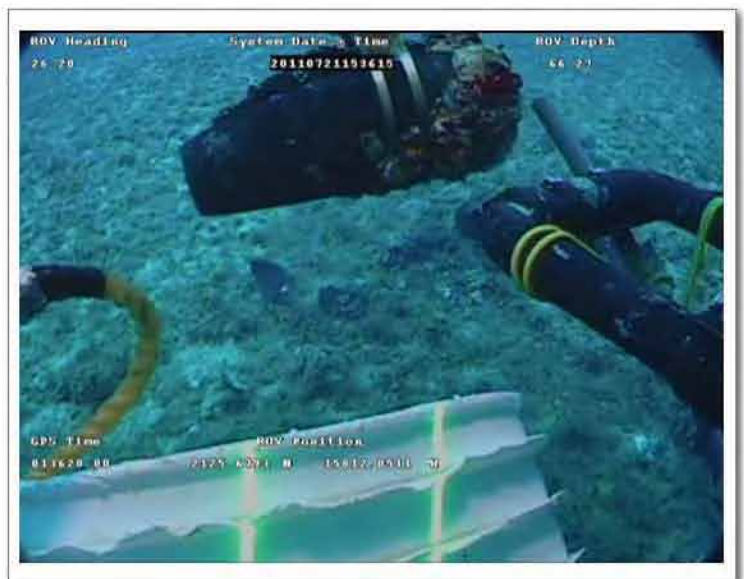
Item 119_4 Projectile



Item 120_2 Projectile



Item 121_1 Projectile



Item 121_2 Projectile



Item 121_3 Projectile



Item 122_1 Projectile



Item 122_2 Projectile



Item 123_1 Small Arms



Item 123_2 Small Arms



Item 124_1 Projectile



Item 125_1 Projectile



Item 125_2 Projectile



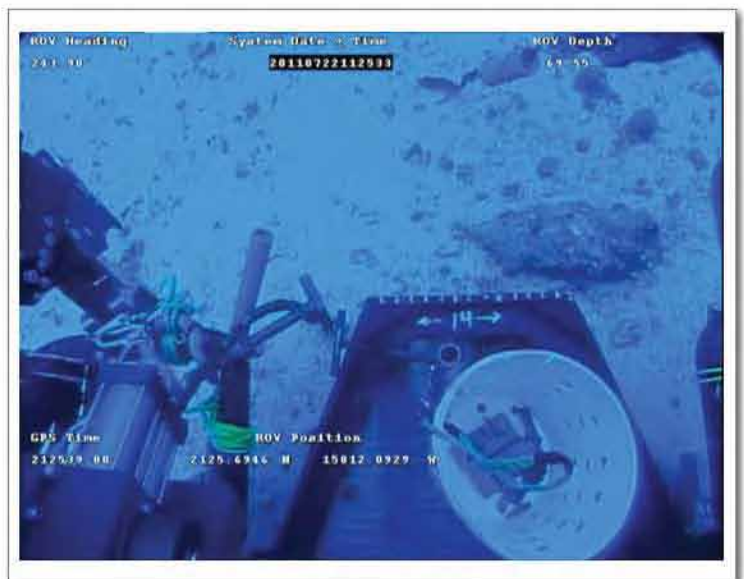
Item 126_1 Small Arms



Item 127_1 Projectile



Item 128_1 Small Arms



Item 129_1 Projectile



Item 130_1 Projectile



Item 130_2 Projectile



Item 131_1 Projectile



Item 132_1 Small Arms



Item 133 and 134 Projectile



Item 135_1 Projectile



Item 135_2 Projectile



Item 136 and 137 Projectile



Item 138_1 Projectile



Item 138_2 Projectile



Item 139_1 Small Arms



Item 140_1 Projectile



Item 140_2 Projectile



Item 141_1 Projectile



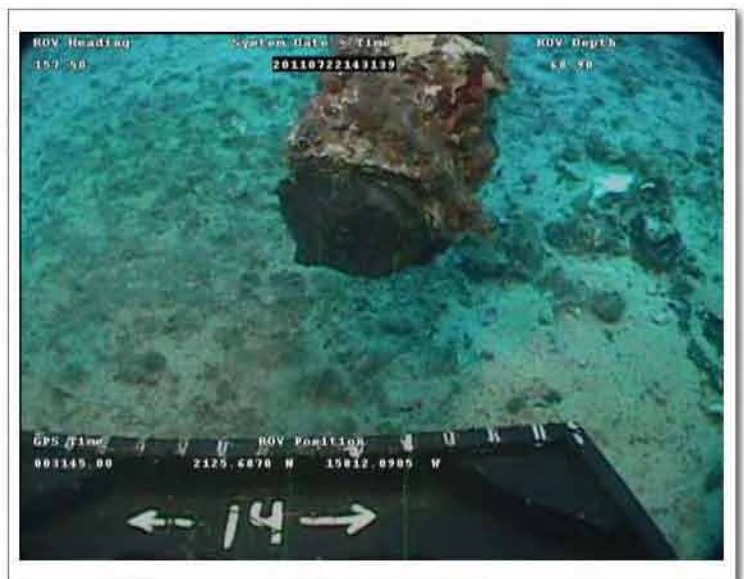
Item 141_2 Projectile



Item 142_2 Projectile



Item 143_1 Projectile



Item 143_2 Projectile



Item 144_1 Projectile



Item 144_2 Projectile



Item 145_1 Projectile



Item 146_1 Projectile



Item 147_1 Projectile



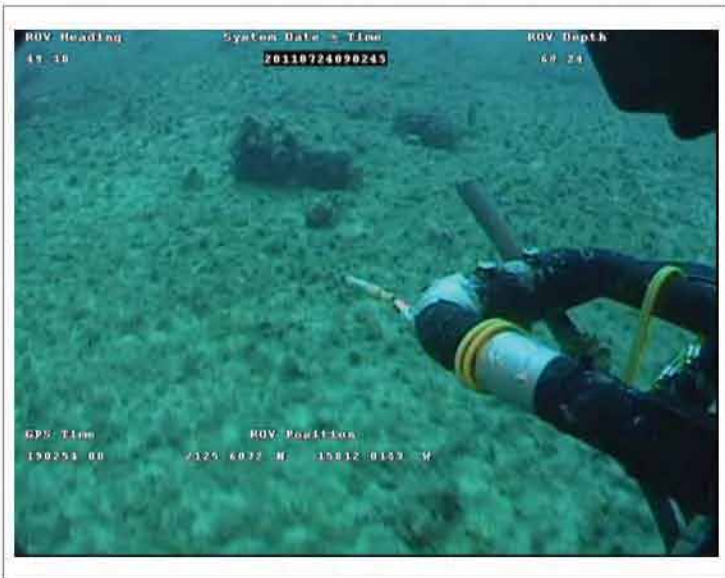
Item 147_2 Projectile



Item 147_2 Projectile copy



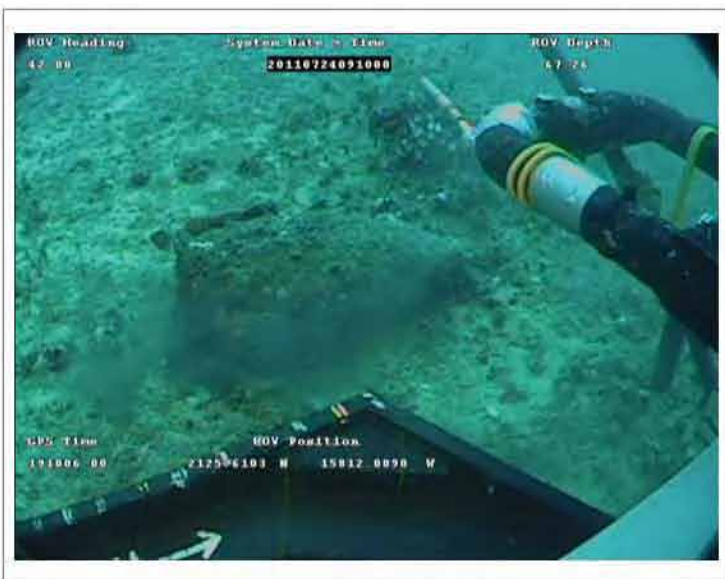
Item 147_3 Projectile



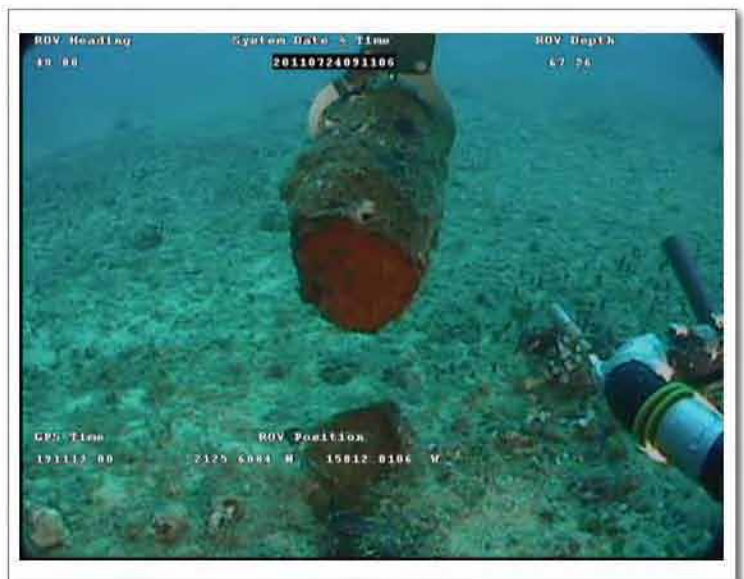
Item 148_1 Projectile



Item 148_2 Projectile



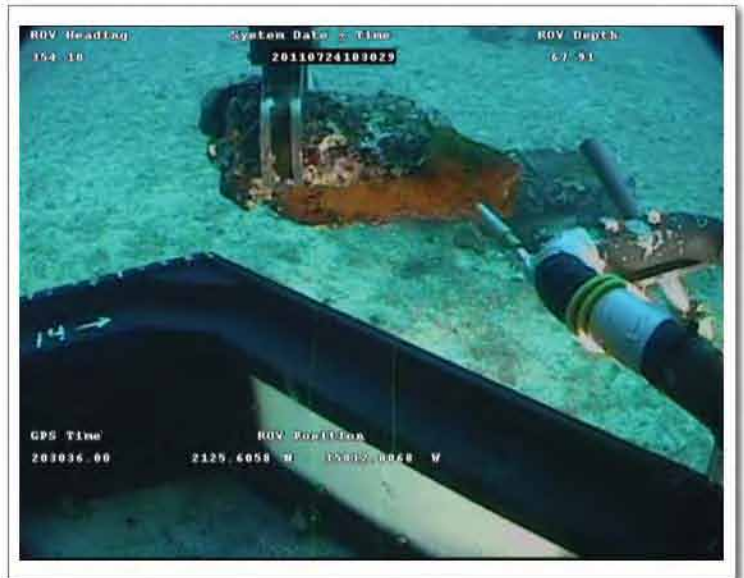
Item 149_1 Projectile



Item 149_2 Projectile



Item 150_1 Projectile



Item 150_2 Projectile



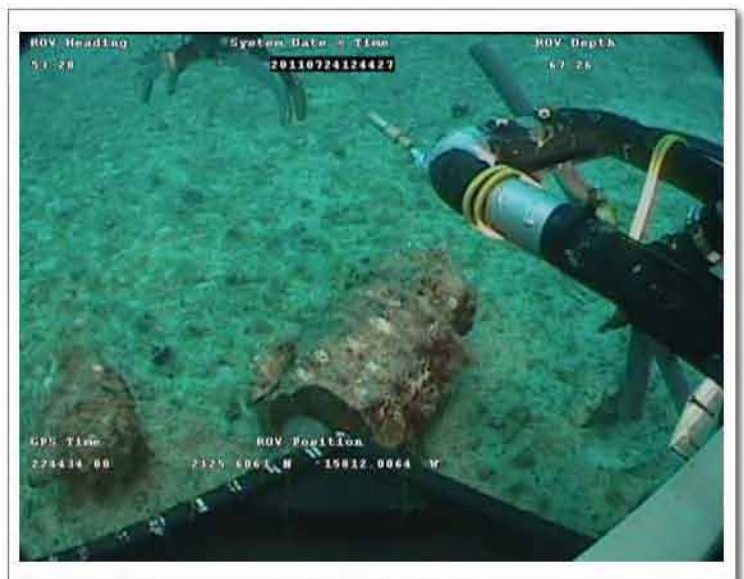
Item 151_2 Projectile



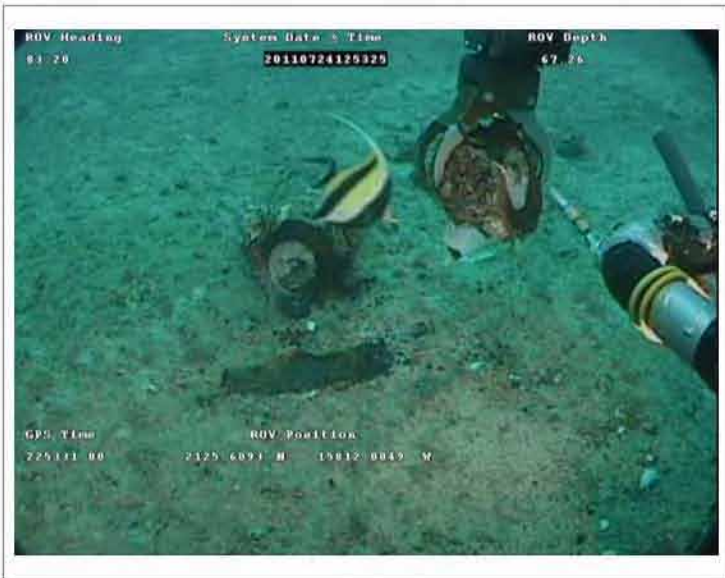
Item 151_3 Projectile



Item 151_4 Projectile



Item 152_1 Projectile



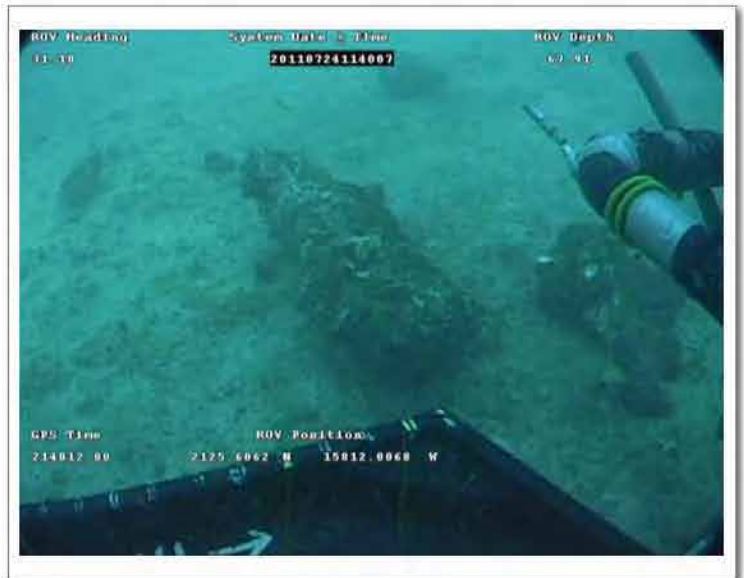
Item 152_2 Projectile



Item 152_3 Projectile



Item 152_4 Projectile



Item 153_1 Projectile



Item 153_2 Projectile



Item 153_3 Projectile

Draft Final Report Ordnance Reef (HI-06) Technology Demonstration



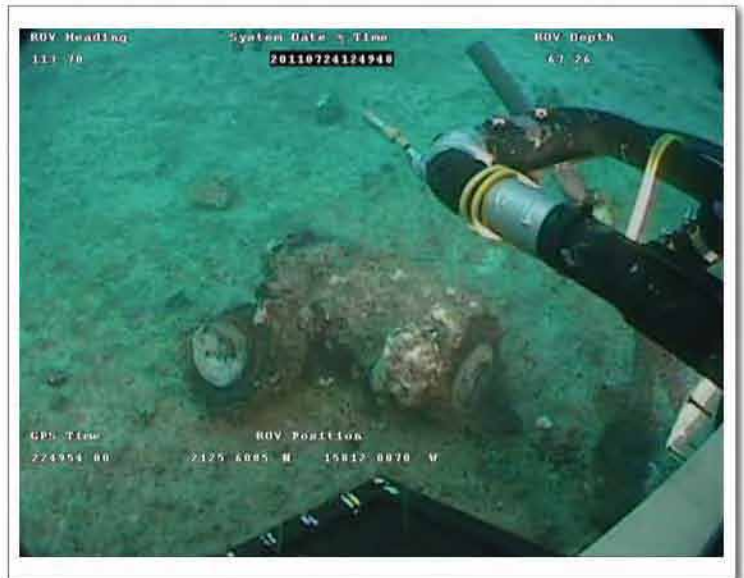
Item 154_1 Projectile



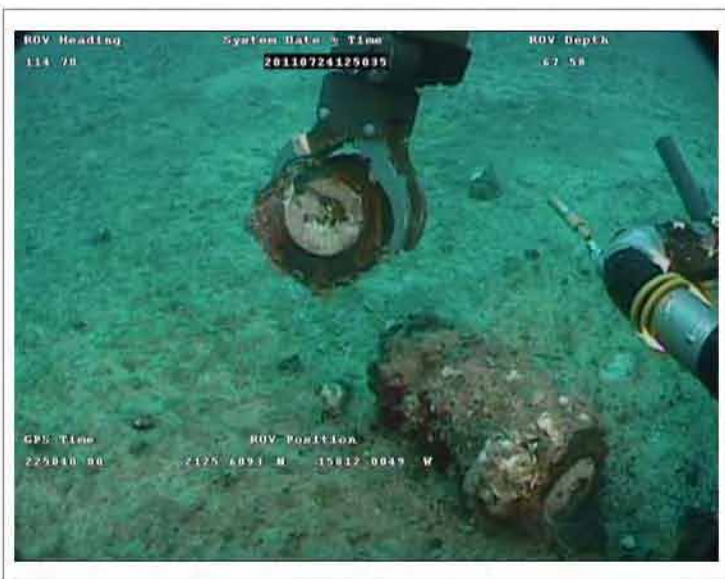
Item 154_2 Projectile



Item 154_3 Projectile



Item 155_1 Projectile



Item 155_2 Projectile Piece



Item 155_3 Projectile Piece



Item 156_1 Projectile



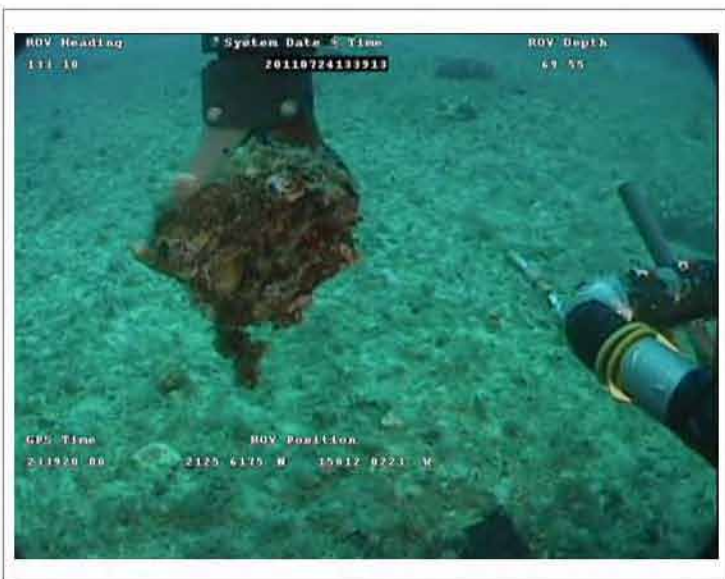
Item 156_2 Projectile



Item 157_1 Projectile



Item 158_1 Projectile



Item 158_2 Projectile



Item 158_3 Projectile



Item 159_3 Projectile



Item 160_1 Projectile



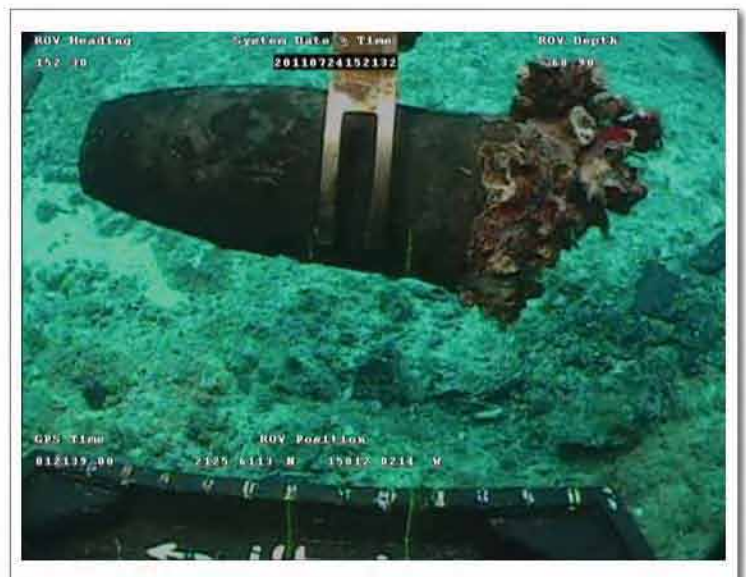
Item 160_2 Projectile



Item 160_3 Projectile



Item 161_1 Projectile



Item 161_2 Projectile

Draft Final Report Ordnance Reef (HI-06) Technology Demonstration



Item 161_3 Projectile



Item 162_1 Projectile



Item 162_2 Projectile



Item 162_3 Projectile



Item 163_1 Projectile



Item 163_2 Projectile



Item 163_3 Projectile



Item 164_1 Projectile



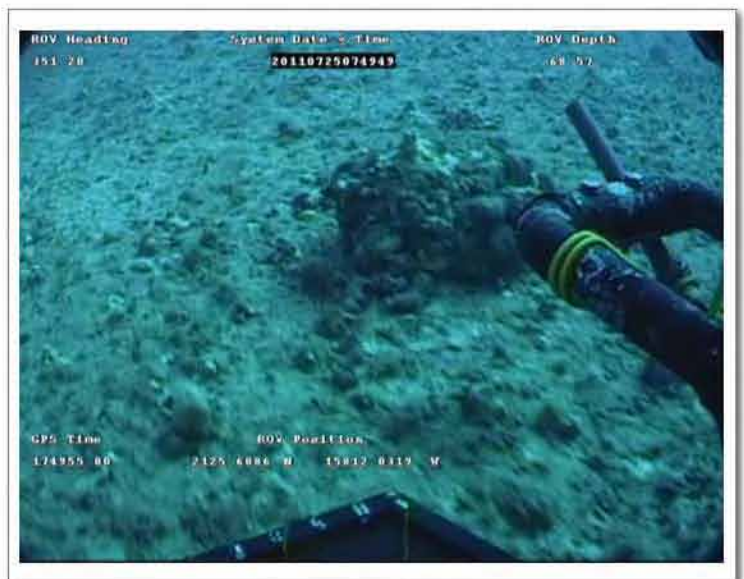
Item 164_2 Projectile



Item 164_3 Projectile



Item 165_1 Projectile



Item 166_1 Projectile

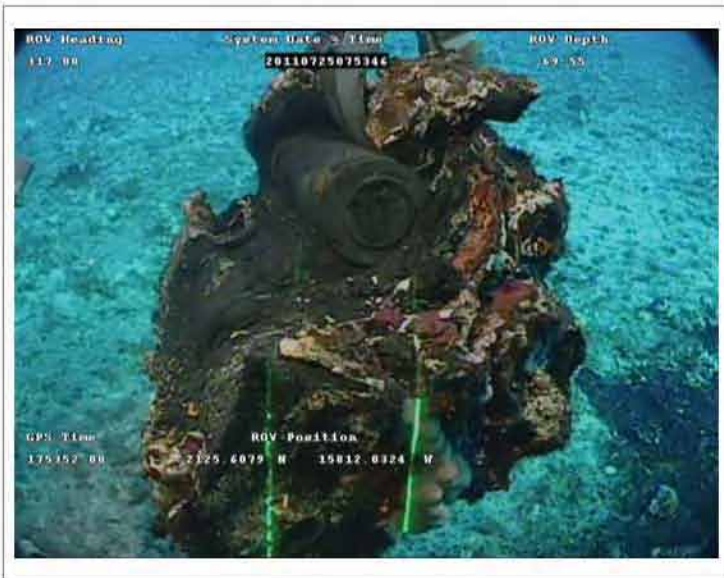
Draft Final Report Ordnance Reef (HI-06) Technology Demonstration



Item 166_2 Fragmentation Bomb



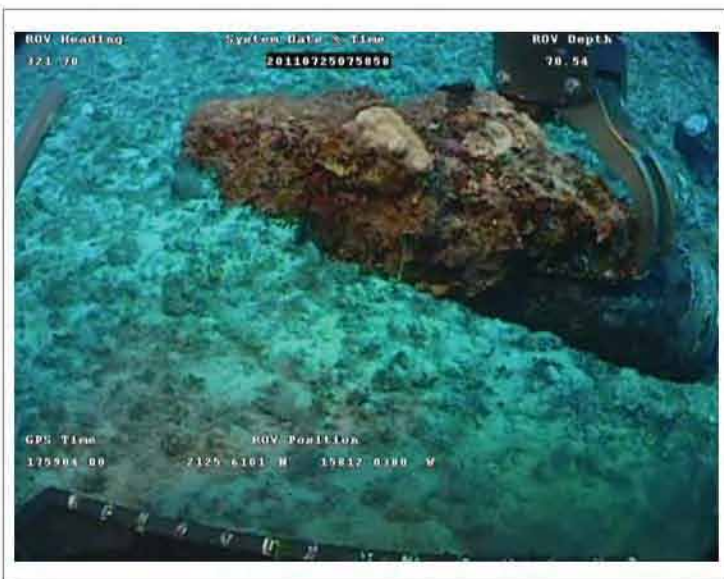
Item 166_3 Fragmentation Bomb



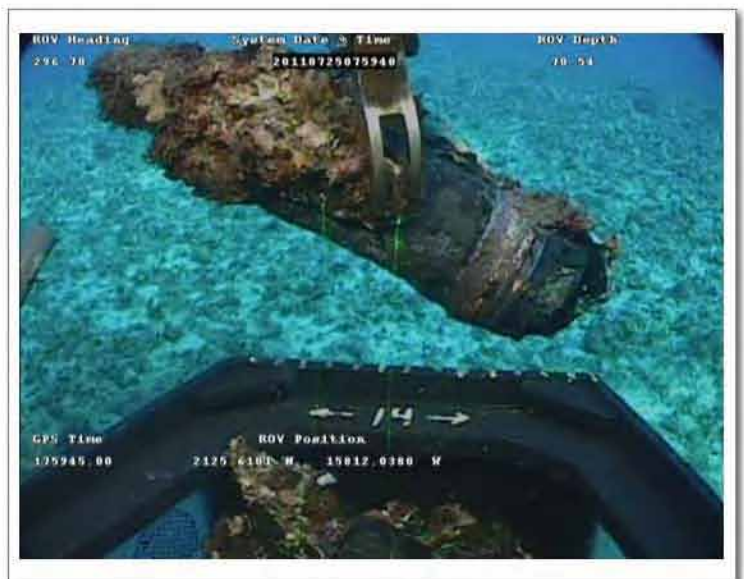
Item 166_4 Fragmentation Bomb



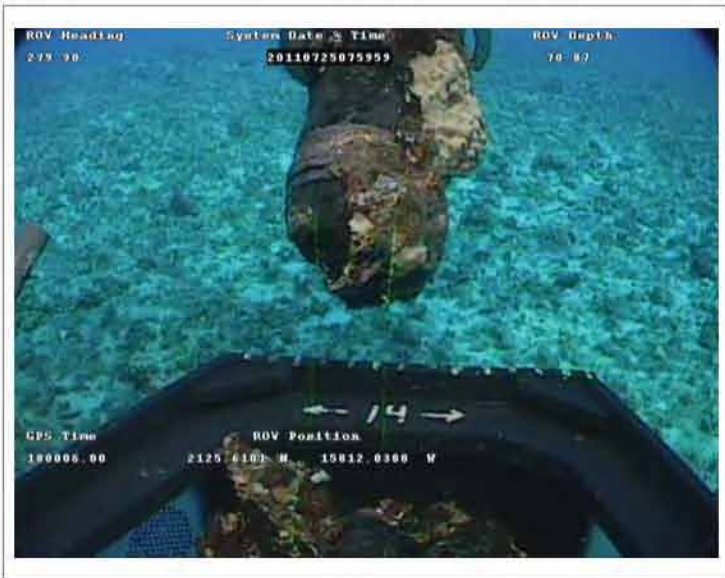
Item 167_1 Projectile



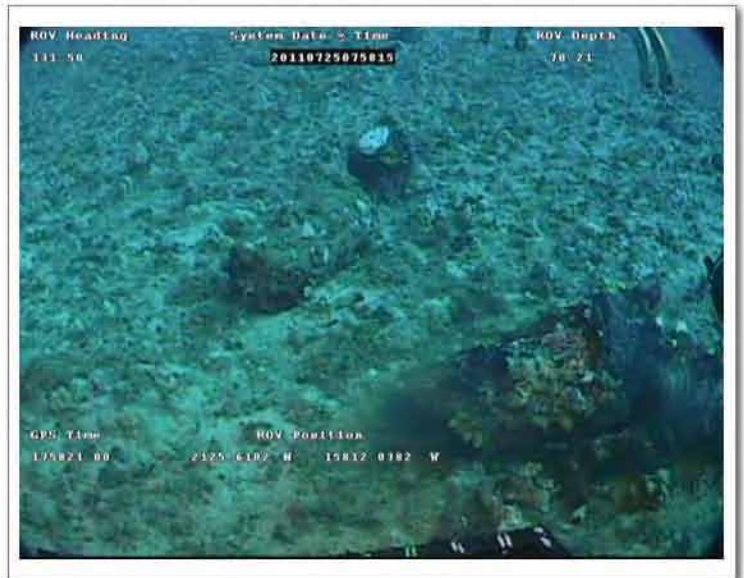
Item 167_2 Projectile



Item 167_3 Projectile



Item 167_4 Projectile



Item 168_1 Projectile



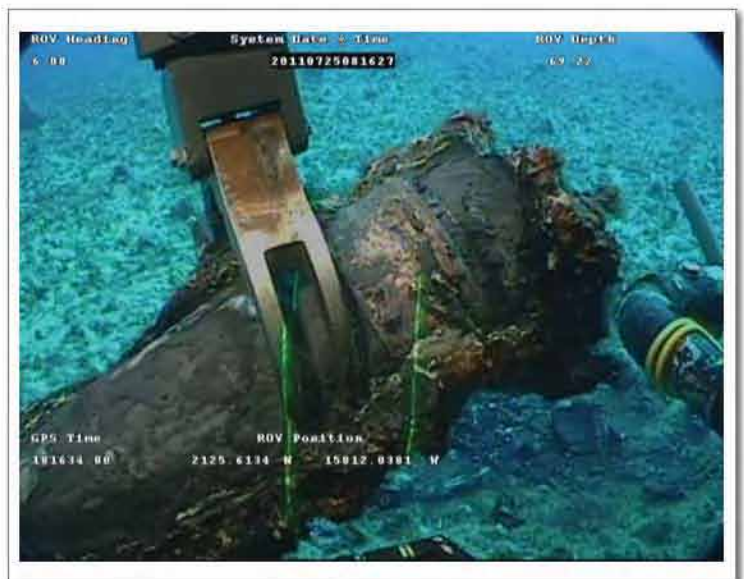
Item 168_2 Projectile



Item 170_1 Canister



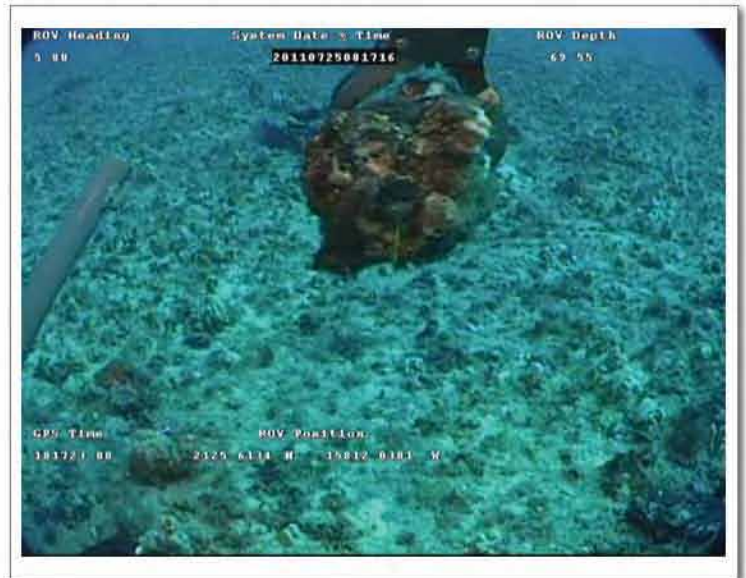
Item 171_1 Projectile



Item 171_2 Projectile



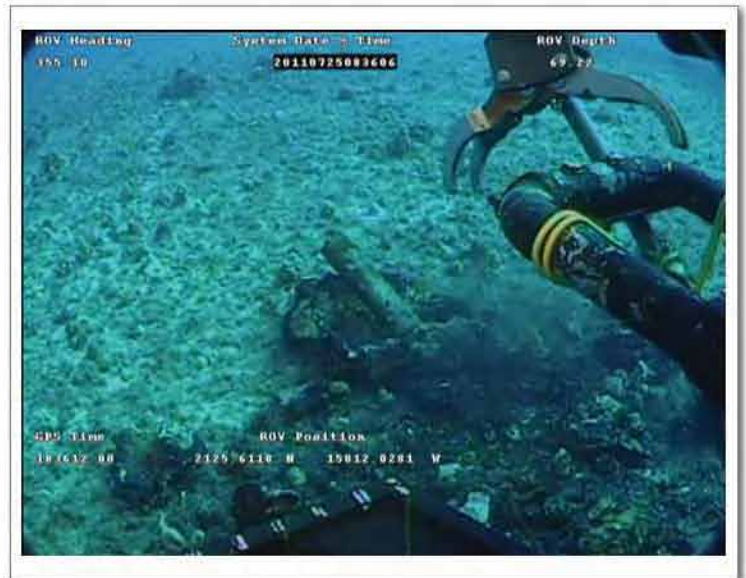
Item 171_3 Projectile



Item 171_4 Projectile



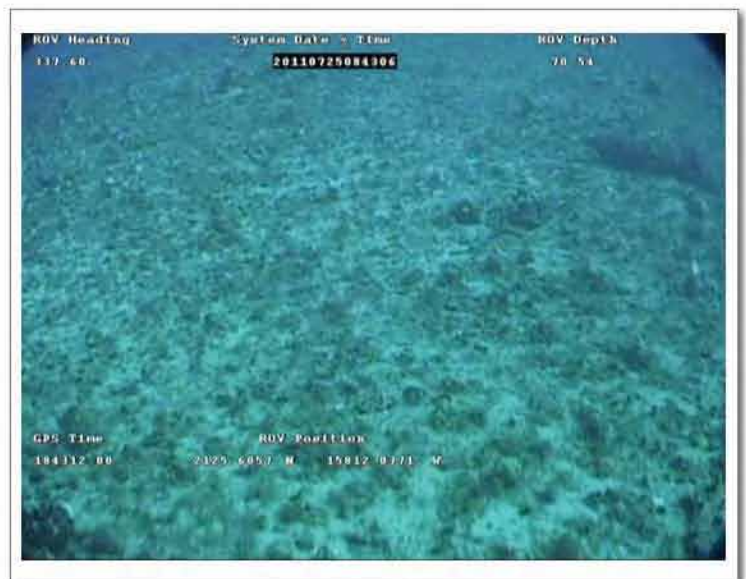
Item 172_1 Projectile



Item 172_2 Projectile



Item 173_1 Projectile



Item 174_1 Projectile



Item 174_2 Projectile



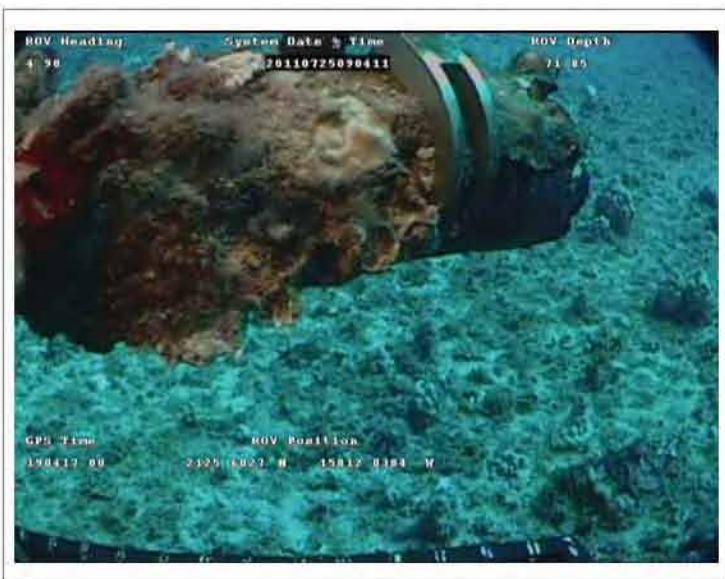
Item 174_3 Projectile



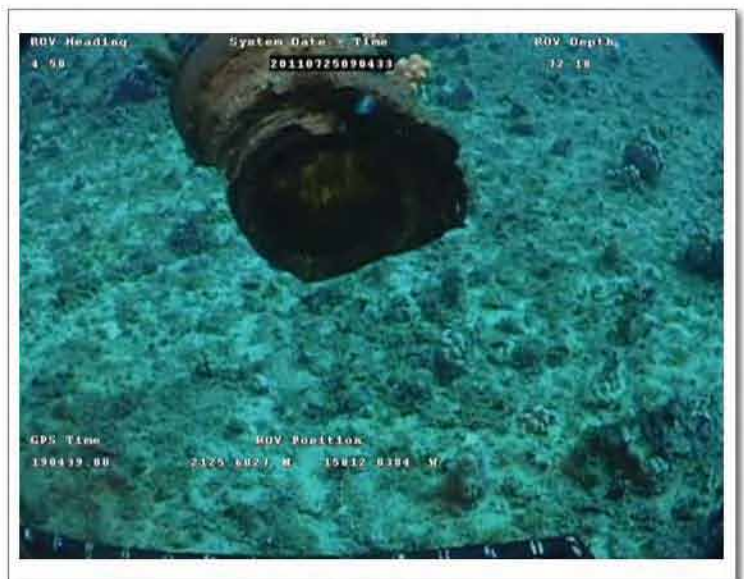
Item 175_1 Projectile



Item 176_1 Projectile



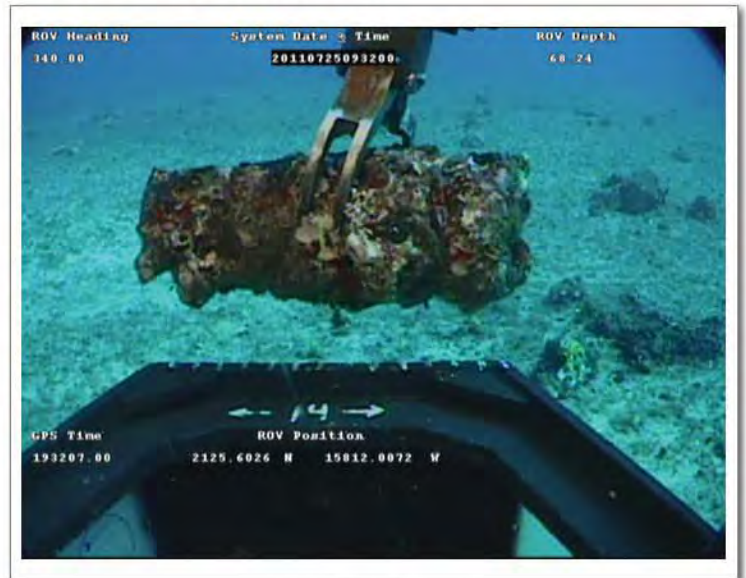
Item 176_2 Projectile



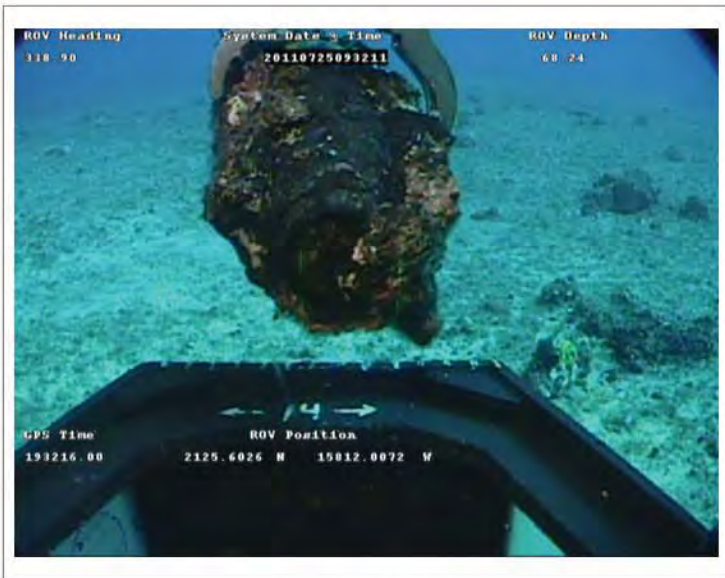
Item 176_3 Projectile



Item 177_1 Projectile



Item 177_2 Projectile



Item 177_3 Projectile

ROUMRS Item Location Table

OID	Date	Item Number	Time	From GPS Lat	Latitude	From GPS Long	Take out negative	Longitude	Ordnance Type	Diameter inches	Length inches	Condition	Armed Condition	Left (0) or Picked (1)	Basket Order	Distance off	Easting	Northing	Heading From Ship	Depth	Coral Damaged	Sea Floor Material	Comments
1	13/07/2011	1	13:17:37						Small Arms	0	0	Unfired	N/A	0		237	0	0	210	0	No	Rock	Ammo Can left in place
3	13/07/2011	3	13:35:30						Small Arms	0	0	Unfired	N/A	0		260			207	0	No	Rock	Two Ammo cans left in place
26	18/07/2011	26		2125.658	2125.657500	-15812.089	15812.0886	-158.2014767	Small Arms	0.5	3	N/A	N/A	0						0	No	Rock	
27	18/07/2011	27		2125.658	2125.658100	-15812.090	15812.09	-158.2015	Small Arms	0.3	2	N/A	N/A	1	3					0	No	Rock	
28	18/07/2011	28		2125.658	2125.658000	-15812.088	15812.0879	-158.201465	Small Arms	1	5	N/A	N/A	1	3					0	No	Sand	4 ea
29	18/07/2011	29		2125.676	2125.675500	-15812.078	15812.078	-158.20133	Small Arms	1	5	N/A	N/A	1	3					0	No	Rock	2 ea
35	19/07/2011	35	8:38:09	2125.600	2125.599600	-15812.015	15812.0152	-158.2002533	Small Arms	14	16	N/A	N/A	0						0	No	Rock	Box
22	16/07/2011	22	10:00:54	2125.497	2125.495000	-15812.981	15812.9812	-158.2163533	Small Arms	0.3	2	N/A	N/A	0		0	0	0	0	0	No	Rock	Several Hundred small arms
53	19/07/2011	53	10:23:38	2125.595	2125.426583	-15811.954	15811.954	-158.1992333	Small Arms (LP	7.62	N/A	N/A	N/A	0	0	0	0	0	0	0	No	Rock	left till basket is fixed
55	19/07/2011	55	10:40:54	2125.599	2125.426643	-15811.991	15811.9912	-158.1998533	Small Arms (81	7.62	N/A	N/A	N/A	0	0	0	0	0	0	0	No	Rock	cemented
112	21/07/2011	112	12:36:57	2125.722	2125.428700	-15812.089	15812.089	-158.2014833	Small Arms	0.31	3	N/A	N/A	1	3	0	0	0	0	0	No	Sand	Pile of small arms
107	21/07/2011	107	11:31:48	2125.721	2125.42875	-15812.093	15812.0927	-158.201545	Small Arms	0.31	3	N/A	N/A	1	3	0	0	0	0	0	No	Sand	small arms pile bucket num 2
123	22/07/2011	123	9:26:17	2125.718	2125.428628	-15812.087	15812.0867	-158.201445	Small Arms	0.5	6	N/A	N/A	1	3	0	0	0	0	0	No	Sand	bucket 4
105	21/07/2011	105	10:07:10	2125.720	2125.428658	-15812.088	15812.0881	-158.2014683	Small Arms	0.31	3	N/A	N/A	1	3	0	0	0	0	0	No	Sand	Pile of small arms.
126	22/07/2011	126	10:08:20	2125.718	2125.428628	-15812.087	15812.0869	-158.2014483	Small Arms	0.5	6	N/A	N/A	1	3	0	0	0	0	0	No	Sand	Bucket 5
132	22/07/2011	132	11:55:00	2125.718	2125.428628	-15812.087	15812.0869	-158.2014483	Small Arms	0.5	6	N/A	N/A	1	3	0	0	0	0	0	No	Sand	
128	22/07/2011	128	10:41:00	2125.717	2125.428618	-15812.087	15812.0869	-158.2014483	Small Arms	0.5	6	N/A	N/A	1	3	0	0	0	0	0	No	Sand	
139	22/07/2011	139	13:08:54	2125.709	2125.428483	-15812.094	15812.0935	-158.2015583	Small Arms	0.5	6	N/A	N/A	1	3	0	0	0	0	0	No	Sand	bucket8
185	27/07/2011	185	12:43:34	2125.718	2125.428632	-15812.068	15812.0679	-158.2011317	Small Arms	0.5	6	N/A	N/A	1	6	80	0	0	325	0	No	Sand	bucket 1
186	27/07/2011	186	12:49:23	2125.717	2125.428610	-15812.066	15812.0657	-158.201095	Small Arms	0.5	6	N/A	N/A	1	6	92	0	0	324	0	No	Sand	bucket 2
187	27/07/2011	187	12:53:03	2125.720	2125.428662	-15812.067	15812.067	-158.2011167	Small Arms	0.5	6	N/A	N/A	1	6	92	0	0	324	0	No	Sand	bucket 3
188	27/07/2011	188	12:55:54	2125.823	2125.430387	-15812.170	15812.1702	-158.2028367	Small Arms	0.5	6	N/A	N/A	1	6	90	0	0	326	0	No	Sand	bucket 4
189	27/07/2011	189	13:02:53	2125.823	2125.430387	-15812.170	15812.1702	-158.2028367	Small Arms	0.5	6	N/A	N/A	1	6	94	0	0	327	0	No	Sand	bucket 5
190	27/07/2011	190	13:26:33	2125.716	2125.428592	-15812.066	15812.0656	-158.2010933	Small Arms	0.5	6	N/A	N/A	1	6	84	0	0	325	0	No	Sand	bucket 6
192	27/07/2011	192	14:31:15	2125.721	2125.428690	-15812.063	15812.0625	-158.2010417	Small Arms	0.5	6	N/A	N/A	1	6	91	0	0	322	0	No	Sand	BUCKET 7
193	27/07/2011	193	15:29:09	2125.726	2125.428767	-15812.059	15812.0592	-158.2009867	Small Arms	0.5	6	N/A	N/A	1	6	0	0	0	0	0	No	Sand	bucket 7
194	27/07/2011	194	16:50:00	2125.719	2125.428647	-15812.061	15812.0608	-158.2010133	Small Arms	.308/ .50	6	N/A	N/A	1	6								
196	28/07/2011	196	17:06:05	2125.714	2125.428562	-15812.066	15812.0662	-158.2011033	Small Arms	0.5	6	N/A	N/A	1	6								
197	28/07/2011	197	17:11:28	2125.714	2125.428567	-15812.067	15812.0665	-158.2011083	Small Arms	0.5	6	N/A	N/A	1	6								
198	28/07/2011	198	17:20:26	2125.715	2125.428577	-15812.068	15812.0679	-158.2011317	Small Arms	0.5	6	N/A	N/A	1	6								#163 was entered twice, so renumber.
200	29/07/2011	200	10:08:14	2125.840	2125.430667	-15812.367	15812.3668	-158.2061133	Small Arms	12	16	N/A	N/A	0	0	0	2125.84	15812.37	0	0	No	Rock	Box Small Arms
201	29/07/2011	201	10:09:21	2125.837	2125.430622	-15812.371	15812.3711	-158.206185	Small Arms	12	16	N/A	N/A	0	0	0	2125.84	15812.37	0	0	No	Rock	Box Small Arms
58	19/07/2011	58	10:50:18	2125.594	2125.426570	-15811.989	15811.9893	-158.1998217	Sq. Truck Battery	N/A	N/A	N/A	N/A	0	0	0	0	0	0	0	No	Rock	Vehicle battery
218	29/07/2011	218	11:10:25	2125.847	2125.430785	-15812.384	15812.3841	-158.2064017	Unknown	14	20	N/A	N/A	0	0	157	0	0	21	0	No	Rock	Possible Box
90	20/07/2011	90	15:08:14	2125.612	2125.426860	-15812.055	15812.0552	-158.20092	Rebar	1.5	25	N/A	N/A	0	0	0	0	0	0	0	No	Rock	Rebar left in place
114	21/07/2011	114	13:10:22	2125.721	2125.428685	-15812.089	15812.0893	-158.2014883	Unknown			N/A	N/A	0							No	Sand	24 in Diameter
191	27/07/2011	191	13:33:31	2125.711	2125.428523	-15812.065	15812.065	-158.2010833	Fuze	5	7	Fuzed	Unarmed	1	6	93	0	0	325	0	No	Sand	Possible bomb base fuze.
166	25/07/2011	166	8:05:39	2125.6084	2125.426807	-15812.032	15812.0316	-158.2005267	Bomb	4	12	Unfuzed	Unarmed	1	5	28	0	0	87	0	No	Rock	Fragmentation
74	19/07/2011	74	13:37:31	2125.606	2125.426767	-15812.026	15812.026	-158.2004333	Bomb (40 lb)	6	25	Unfuzed	Unarmed	1	4	0	0	0	0	0	No	Rock	
96	20/07/2011	96	15:42:50	2125.577	2125.426277	-15812.017	15812.0174	-158.20029	Bomb	8	36	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	cemented in place.
98	20/07/2011	98	16:08:54	2125.607	2125.426775	-15812.015	15812.0147	-158.200245	Bomb	8	36	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	cemented
23	16/07/2011	23	10:10:16	2125.495	2125.495000	-15812.984	15812.9842	-158.2164033	Projectile	8	36	Unfuzed	Unarmed	1	2	0	0	0	146	0	No	Rock	
24	17/07/2011	24		2125.634	2125.554000	-15812.077	15812.0774	-158.20129	Projectile	6	24	Unfuzed	Unarmed	0	0	0	0	0	0	74	No	Rock	Coral growing on projectile
25	18/07/2011	25		2125.646	2125.634100	-15812.081	15812.081	-158.20135	Projectile	5	20	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	Coral growing on projectile
30	18/07/2011	30	17:13:35	2125.721	2125.720700	-15812.087	15812.0865	-158.2014417	Projectile	3	18	Unfuzed	Unarmed	1	3	0	0	0	0	0	No	Sand	
31	18/07/2011	31	17:18:41	2125.722	2125.722100	-15812.086	15812.0857	-158.2014283	Projectile	5	16	Unfuzed	Unarmed	0	0					0	No	Sand	
32	18/07/2011	32	17:20:54	2125.722	2125.722100	-15812.086	15812.0857	-158.2014283	Projectile	4	14	Unfuzed	Unarmed	0	0					0	No	Sand	
33	18/07/2011	33	17:24:21	2125.723	2125.723100	-15812.090	15812.0896	-158.2014933	Projectile	5	14	Unfuzed	Unarmed	1	3	0	0	0	0	0	No	Sand	
34	18/07/2011	34	17:29:00	2125.712	2125.712400	-15812.089	15812.0891	-158.201485	Projectile	5	18	Unfuzed	Unarmed	1	3	0	0	0	0	0	No	Sand	
36	19/07/2011	36	8:50:26	2125.575	2125.426250	-15812.033	15812.033	-158.20055	Projectile	3	25	Unfuzed	Unarmed	1	3	0	0	0	0	0	Yes	Rock	
37	19/07/2011	37	9:04:57	2125.563	2125.426050	-15812.026	15812.026	-158.2004333	Projectile	5	25	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	Cemented
38	19/07																						

ROUMRS Item Location Table

OID	Date	Item Number	Time	From GPS Lat	Latitude	From GPS Long	Take out negative	Longitude	Ordnance Type	Diameter inches	Length inches	Condition	Armed Condition	Left (0) or Picked (1)	Basket Order	Distance off	Easting	Northing	Heading From Ship	Depth	Coral Damaged	Sea Floor Material	Comments
159	24/07/2011	159	15:20:49	2125.6113	21.426855	-15812.021	15812.0214	-158.2003567	Projectile	3	12	Unfuzed	Unarmed	1	5	25	0	0	82	0	No	Rock	
160	24/07/2011	160	15:52:53	2125.6122	21.426870	-15812.017	15812.0173	-158.2002883	Projectile	4	14	Unfuzed	Unarmed	1	5	34	0	0	83	0	No	Sand	
161	25/07/2011	161	7:24:59	2125.5966	21.426610	-15812.043	15812.0430	-158.2007167	Projectile	4	14	Unfuzed	Unarmed	1	5	50	0	0	129	0	No	Rock	
162	25/07/2011	162	7:28:11	2125.5952	21.426587	-15812.044	15812.0439	-158.2007317	Projectile	4	14	Unfuzed	Unarmed	1	5	47	0	0	126	0	No	Rock	
163	25/07/2011	163	7:34:44	2125.5947	21.426578	-15812.047	15812.0467	-158.2007783	Projectile	4	14	Unfuzed	Unarmed	1	5	38	0	0	142	0	Yes	Rock	
164	25/07/2011	164	7:46:06	2125.6088	21.426813	-15812.028	15812.0280	-158.2004667	Projectile	4	14	Unfuzed	Unarmed	0	0	50	0	0	94	0	No	Rock	Left in place due to coral growth
165	25/07/2011	165	7:58:36	2125.6084	21.426807	-15812.032	15812.0316	-158.2005267	Projectile	2	10	Fuzed	Unarmed	0	0	30	0	0	88	0	No	Rock	left in place. canister outside of projectile.
167	25/07/2011	167	8:06:47	2125.6101	21.426835	-15812.038	15812.0380	-158.2006333	Projectile	4	20	Fuzed	Unarmed	1	5	30	0	0	89	0	No	Rock	
168	25/07/2011	168	8:10:43	2125.6109	21.426848	-15812.038	15812.0380	-158.2006333	Projectile	4	14	Unfuzed	Unarmed	0	0	30	0	0	89	0	No	Rock	cemented
169	25/07/2011	169	8:17:40	2125.6139	21.426898	-15812.037	15812.0373	-158.2006217	Projectile	5	20	Fuzed	Unarmed	1	5	31	0	0	75	0	No	Rock	
170	25/07/2011	170	8:33:11	2125.6119	21.426865	-15812.028	15812.0276	-158.20046	Projectile	2	10	Fuzed	Unarmed	0	0	42	0	0	83	0	Yes	Rock	illumination canisters. left in place
171	25/07/2011	171	8:38:14	2125.6096	21.426827	-15812.031	15812.0305	-158.2005083	Projectile	5	20	Unfuzed	Unarmed	0	0	38	0	0	91	0	No	Rock	cemented
172	25/07/2011	172	8:45:08	2125.6075	21.426792	-15812.038	15812.0381	-158.200635	Projectile	4	20	Fuzed	Unarmed	1	5	22	0	0	101	0	No	Rock	
173	25/07/2011	173	8:53:26	2125.6047	21.426745	-15812.035	15812.0345	-158.200575	Projectile	4	20	Fuzed	Unarmed	1	5	29	0	0	102	0	No	Rock	
174	25/07/2011	174	9:03:17	2125.6038	21.426730	-15812.038	15812.0384	-158.20064	Projectile	4	14	Unfuzed	Unarmed	1	5	24	0	0	120	0	No	Rock	
175	25/07/2011	175	9:29:33	2125.6035	21.426725	-15812.003	15812.0033	-158.200055	Projectile	4	14	Unfuzed	Unarmed	1	5	75	0	0	101	0	No	Rock	
176	25/07/2011	176	9:36:27	2125.5999	21.425165	-15812.003	15812.0031	-158.2000517	Projectile	4	14	Unfuzed	Unarmed	0	0	78	0	0	104	0	No	Rock	cemented
177	25/07/2011	177	9:42:15	2125.6011	21.426685	-15812.005	15812.0049	-158.2000817	Projectile	4	18	Fuzed	Unarmed	1	5	77	0	0	105	0	No	Rock	
178	25/07/2011	178	9:46:44	2125.5948	21.426580	-15812.004	15812.0035	-158.2000583	Projectile	4	20	Fuzed	Unarmed	1	5	78	0	0	103	0	No	Rock	
179	25/07/2011	179	10:03:50	2125.5987	21.426645	-15812.030	15812.0297	-158.200495	Projectile	4	20	Fuzed	Unarmed	0	0	42	0	0	103	0	No	Rock	cemented
180	25/07/2011	180	10:15:33	2125.5842	21.426403	-15812.029	15812.0287	-158.2004783	Projectile	4	16	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	Cemented
181	25/07/2011	181	10:45:12	2125.5845	21.426408	-15812.016	15812.0161	-158.2002683	Projectile	4	20	Fuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	Cemented
182	25/07/2011	182	11:01:44	2125.5856	21.426427	-15812.027	15812.0268	-158.2004467	Projectile	4	12	Unfuzed	Unarmed	1	5	78	0	0	157	0	No	Rock	
183	25/07/2011	183	11:06:10	2125.5842	21.426403	-15812.017	15812.0174	-158.20029	Projectile	5	14	Fuzed	Unarmed	1	5	82	0	0	154	0	No	Rock	
184	26/07/2011	184	14:56:42	2125.452	21.424207	-15812.135	15812.135	-158.2022433	Projectile	8	30	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	Left in place
195	28/07/2011	195	16:58:21	2125.695	21.428247	-15812.070	15812.0697	-158.2011617	Projectile	5	20	Unfuzed	Unarmed	1	6	0	0	0	102	0	No	Rock	
199	29/07/2011	199	10:07:24	2125.841	21.430683	-15812.366	15812.3663	-158.206105	Projectile	8	30	Fuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
202	29/07/2011	202	10:10:03	2125.843	21.430712	-15812.371	15812.371	-158.2061833	Projectile	5	14	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
203	29/07/2011	203	10:10:28	2125.845	21.430750	-15812.355	15812.3553	-158.2059217	Projectile	5	16	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
204	29/07/2011	204	10:10:57	2125.850	21.430825	-15812.360	15812.3604	-158.2060067	Projectile	5	16	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
205	29/07/2011	205	10:11:59	2125.851	21.430853	-15812.366	15812.3656	-158.2060933	Projectile	6	20	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
206	29/07/2011	206	10:14:14	2125.848	21.430792	-15812.358	15812.3575	-158.2059583	Projectile	6	20	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
207	29/07/2011	207	10:16:06	2125.840	21.430660	-15812.362	15812.3624	-158.20604	Projectile	5	16	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
208	29/07/2011	208	10:17:03	2125.840	21.430660	-15812.363	15812.3625	-158.2060417	Projectile	5	16	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
209	29/07/2011	209	10:19:34	2125.846	21.430767	-15812.356	15812.3559	-158.2059317	Projectile	8	30	Fuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
210	29/07/2011	210	10:23:11	2125.848	21.430800	-15812.360	15812.3601	-158.2060017	Projectile	5	14	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
211	29/07/2011	211	10:24:44	2125.843	21.430720	-15812.371	15812.3711	-158.206185	Projectile	5	14	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
212	29/07/2011	212	10:29:55	2125.839	21.430653	-15812.367	15812.3667	-158.2061117	Projectile	5	14	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
213	29/07/2011	213	10:30:23	2125.844	21.430733	-15812.364	15812.364	-158.2060667	Projectile	5	14	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
214	29/07/2011	214	10:31:33	2125.845	21.430750	-15812.356	15812.356	-158.2059333	Projectile	5	14	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
215	29/07/2011	215	10:32:32	2125.848	21.430797	-15812.357	15812.3566	-158.2059433	Projectile	6	22	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
216	29/07/2011	216	10:58:25	2125.848	21.430805	-15812.362	15812.3615	-158.206025	Projectile	4	14	Unfuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
217	29/07/2011	217	11:06:41	2125.852	21.430872	-15812.368	15812.3676	-158.2061267	Projectile	5	20	Fuzed	Unarmed	0	0	0	0	0	0	0	No	Rock	
2	13/07/2011	2	13:26:19						Projectile	4	12	Unfired	Unarmed	0		244	0	0	209	0	No	Rock	2125.444 15812.122 Left till bucket on sea floor
4	13/07/2011	4	13:47:47						Projectile	3	8	Unfired	Unarmed	0		275	0	0	206	0	No	Rock	
5	13/07/2011	5	14:47:42						Projectile	5	12	Unfired	Unarmed	1	1	251	0	0	207	0	No	Sand	Placed in Hopper
6	14/07/2011	6	10:59:51						Projectile	4	24	Unfuzed	Unarmed	1	1	270	0	0	225	0	Yes	Rock	
7	14/07/2011	7	11:23:28						Projectile	3	10	Unfuzed	Unarmed	1	1	270	0	0	222	0	Yes	Rock	
8	14/07/2011	8	12:05:00						Projectile	4	16	Unfuzed	Unarmed	0		265	0	0	220	0	No	Rock	
9	14/07/2011	9	13:00:20						Projectile	5	16	Unfuzed	Unarmed	0		255	0	0	215	0	No	Rock	
10	14/07/2011	10	13:08:10						Projectile	5	16	Unfuzed	Unarmed	0		255	0	0	215	0	No	Rock	
11	14/07/2011	11	13:15:00						Projectile	5	20	Unfuzed	Unarmed	0		260	0	0	220	0	No	Rock	
12	14/07/2011	12	17:04:06						Projectile	3	10	Unfuzed	Unarmed	1	2	160	0	0	77	0	No	Rock	
13	14/07/2011	13	17:07:05						Projectile	4	18	Unfuzed	Unarmed	1	2	160	0	0	77	0	No	Rock	
14	15/07/2011	14	13:57:25						Projectile	6	24	Fuzed	Unarmed	1	2	54	0	0	66	0	No	Rock	
15	15/07/2011	15	14:01:27						Projectile	6	24	Fuzed	Unarmed	0		54	0	0	66	0	No	Rock	Cemented to Sea Floor
16	15/07/2011	16	14:05:35						Projectile	6	24	Fuzed	Unarmed	1	2	54	0	0	65	0	No	Rock	
17	15/07/2011	17	14:20:00						Projectile	3	14	Unfuzed	Unarmed	0		0	0	0	77	0	No	Rock	20 Feet from back of Basket (7) 2
18	15/07/2011	18	14:41:00						Projectile	5	16	Unfuzed	Unarmed	1	2	0	0	0	78	0	No	Rock	25 ft from left side of Basket (7) 2
19	15/07/2011	19	15:15:30						Projectile	5	16	Unfuzed	Unarmed	0		0	0	0	80	0	No	Rock	35 ft from left side of Basket (7) 2
20	15/07/2011	20	15:18:00					</															

APPENDIX E

Tuesday 12 July 2011

0600 hour safety briefing

- ~~John~~ John calls/teffs that he is sick today
- o JC King onsite
 - Parker Marine is enroute at 7AM etc.
- Asked Chase boats to run us out, but will wait for Parker
- Butch intends to do a mock safety drill off of the DSV to simulate an injury
- Haku Pau mission is to locate divers off of sewer line prior to setting DSV anchors
 - Also need to locate the inboard anchor points for the barge
- 0715 OIT and Haku Pau crew head out to the boat (Hoki Pau)
- 0730 Frank and I head out to the boat
- o 0800 - Prepping the ROV for the water

7/11/11

Continued looking for the
sewer outfall - no good

- Begin packing it in
and reloading the ROV onto
the deck

- Start setting anchors, 1 anchor
is set and the captain runs
us to shore. No further Marine
A&S Engineering takes us to shore

735 At the dock end of the day

Ronald Brown

Tuesday 12 July 2011

- 0600 have safety briefing
 - Spot ^{not} John calls/texts that he is sick today
- o JC King onsite
 - Parker Marine is enroute w/ 7AM etc
- Asked chase boats to run us out, but will wait for Parker
- Butch intends to do a mock safety drill off of the DSV to simulate an injury
- Hake Pan mission is to locate diffusers off of sewer line prior to setting DSV anchors
- Also need to locate the inboard anchor points for the barge
- 0715 OIT and Hake Pan crew head out to the boat (HoKiPaw)
- 0730 Frank and I head out to the boat
- 0800 - Prepping the ROV for the water

20110712

Healy Tidelits came by saying that the inboard buoy markers are in too shallow - which would mean that the DSV must move out. The NOAA locations will not work according to (H.T.)
- ROV in the water @ 0858

0930 Dianne called to get diving access to the 4 Huki Pan points and the 2 inboard DSV points
Put Matt in touch with Frank

1045 React modules moving off to position the DSV mooring points inboard

1200	located	21	25	373	} sewer outfall diffusers location
	diffusers and	158	11	801	
	chain to follow				
	time	21	25	392	
		158	11	833	
		21	25	417	
		158	11	844	

1245 Found out that Mr Wolfe and K are approaching the Huki Pan

Also, ROV is chasing the outfall pipe prior to

20110712

inspecting points

1330 JC + MR Wolfe onboard
They stick around for an
hour and leave at
~ 1440

1500 We pull the ROV to
update some visual info
and the GPS goes down
→ Butch called reminding me to ^{send Eric} coordinate

1515 GPS still down. However, the
outer moorings for the large
are marked, so the ROV will
dive on the buoys that
are out there.

Then hopefully the DSV anchors
can be set and the DSV can
get down to business collecting
munitions.

DSV Mooring Points

C $21^{\circ}25'28.5''$ $-158^{\circ}11'8.0''$

D $21^{\circ}25'11''$ $-158^{\circ}11'7.8''$

~~A~~ ^{REF} $21^{\circ}25'30''$ $-158^{\circ}11'5.95''$

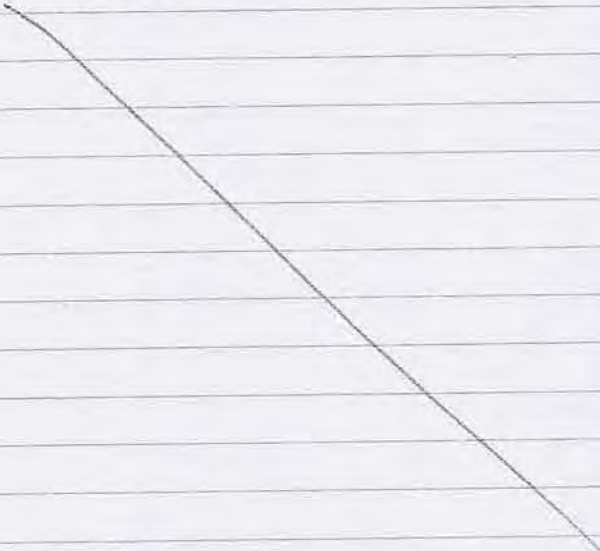
B $21^{\circ}25'36.3''$ $158^{\circ}11'6.62''$

$21^{\circ}25'24.1''$ $-158^{\circ}11'7.61''$ surge cam

908 Copying data files onto
hard drive / cloning it off
of Frank's USB drive +
rewriting it onto new USB
drive

- Need to print 50 item
tracking sheets for Spencer

Ronald J. Barnes



- Wednesday 13 July 2011

0600 Safety briefing onshore

0615 Parkus is onshore
ready to take the guys
out

- I find out that I'm
onshore

0700 AT the Army Rec Center
(operations)

- door isn't open to
the veranda - open area
for office

JC King comes by to
see what's up - he has
a meeting with PAO for
later

1430 John + JC head out
to the Hukilau

→ Having trouble hearing
the demit barge on the
radio

- The guys tried to lower
a basket but it flipped
over on the way down

- 0630 John + JC are on
their way back

(over)

20110713 cont'd

0630 - on their way back

0700 John + JC are on the beach

John talks w/ Parker about
the lowering of the baskets

0730 offsite

Ronald G. Baus

— Thursday 14 July 2011 —

0600 Safety Brief

0700 At the Army Rec Center
ask the employees to open
up the porch and office
doors for us.
- John arrives

0725 Doors are open radio
checks are made.
start working budget

0730 Perform Radio checks

* John C leaves to go find
printer + other required
items

1000 JC onsite

ROV is @ basket + ready
to flip it

Coughlin + Brandenburg are
buying things + should be
back before lunch

* Still need to get data from
yesterday

018 - Basket is flipped

1052 Helpful fisherman left us
know lights were not on
barge. Healy Tibbits are
buying out new lights
→ call from John Coughlin

20110714

1325 The guys are getting ready to raise the one basket with these items.

We have sent the coordinates to lower a second basket and move the RSV (Huki Pau) to that vicinity

RJB

~~21° 25' 46.6" / 158° 11' 8.52"~~

21° 25.503' / 158° 12.001'

1500

ROV cannot make it to the basket. The ROV can make it to the basket and the current is so hard and strong that the crew handling the tether are being too stressed to where they cannot make it to the basket.

1645 GPS has arrived and Coughlin is heading to go get it. Huki Pau is stowing the ROV and the Captain thinks the ARA crew can head to shore at 600pm.

1620 All onshore
Ronald Flowers

Friday 15 July 2011

0600 Safety Brief at Waianai property

0630 Safety brief is over and discussions were had to move all people from the areas if PPE is not properly worn.

0827 In work area at Army Rec Center all set up

- o Note flipped basket does not have tag line and the team is rigging an alternative solution.
- o The plan today is to upright the second basket
- o fill the basket w/ munitions
- o attach and inflate the left balloon
- o tow the left balloon and basket to the demil barge and destroy some munitions

1220 The basket has been uprighted and is being filled by the ROV

2011 07 15

410 John and I are on the Hukil Pan to discuss spiking things up. I anticipate that we will install the GPS and download the vessel data via visual DVL

1800 (about)

~~1550~~ Begin leaving Hukil Pan. Rest of team on Denil Barge are already onshore. For the past hour the team was figuring how to pack the lift balloon for transport on to the bottom.

1900 Everyone except the Hukil Pan night shift is off the water

Ronald J. Bowers

Saturday 16 July 2011

0600 Safety Brief

- The team will try felling the baskets today.

Tomorrow they will be moving them over to the DSV (Dimit Barga)

Note RSV Call Sign = Hukipau

DSV Call Sign = Dimit Barga

* JC will be here at 1030 w/ 3 or 4 guests from UH to go to the barges (Not sure which ones)

* Spoke with Brian about the data and he also spoke with Brent Frank who spoke with Brian. It seems that we have the file structure right on Frank's end, but something obviously is not correct.

0825 Rhonda and Erika are onsite

0900 Michael Parker will stop at the Hukipau for extra life vests to take to JC + his company out to the boats (over)

16 July 2011 cont'd

1030Z JC + Tony Reynr head
out to the Hukri Pan

1057 Butch texts that
the arm is down and that
it requires fixing on board
the Hukri Pan

1125 Butch says that they have
gotten drop locations from
Tony and have passed
those locations on to further

1140 ROV is on deck.

1215 ERIKA steps out to get lunch

1330 The plan is to drop one
basket and make sure that
it lands upright

* Also spoke again w/ Brian
Edwards and it appears

1305 Basket lowered
at bottom

16330 Chase boats called home,
operations stopped,
working on arms.

1930 Arms working correctly
ARA crew departs Hoki Pao

1945 stop all operations

Sunday 17 July 2011

0600 Safety Brief

0620 Depart for Vessels
Huber Paw ROV crew
changing Hydraulic Fluid
in arms and prepping
for lift and Tow

0940 attaching the lift
balloon float/tow line
to the ROV on deck.

Plan is to recover Basket
#7 with

- 2 - 75mm - 3"
- 1 - 90mm - 4"
- 4 - 155mm - 5"

1100 Laser Scale on the
ROV is set to 2"

The data is now set to
record in inches (Not mm,
to be consistent w/ previous
studies

1140 - ROV is also rigged with
the small arms shovel.
James is documenting
the rigging using the
camera so the next
balloon is rigged correctly

17 July cont.

- 1222 ROV in water
- 1227 stbd arm working
- 1230 DSU notes over 6
malfunction w/no faults
or alerts during testing
called Stateside support,
- 1238 Picking up 5" round
that was left behind
yesterday when Arm
failed to work
- 1241 Transit to Basket 7
- 1247 at Basket w/ 5" Round
- 1257 5" in basket 7 2-3"
1-4"
5-5"
- 1330 frame back on basket for
lifting. Need to find
a way to speed that
process. (a float? a pulley?)
- 1400 Towline not working. return
to surface for another.
- 1420 Towline fouled in thruster
Pull ROV to surface manually
- 1450 ROV on deck. Towline was
sucked into thruster from
inside the bucket.

17 July Continued

1513 Thrusters need fuses
changed. operation over
Parker confirmed with
a deep camera that
the Basket is upright
1530 notify J&Houard

1800 ROV crew checks out
thrusters. changes
fuses. one thruster
is damaged and replaced
with spare. We
need to send to Houston
for rebuild.

18 November 2011

- 0600 - Safety Brief - expect good weather.
- 0720 Parker brings the spare Thruster to the pier for shipment to Haerster for repair
- 0730 Comcheck w/ Huki Pau.
Demil Barge is removing Luvored doors on next barge to reduce ROV work load. Also state side support fixed software issue on the ovens last night via cell phone snicker.
Test runs on ovens ongoing.
- 0845 ROV in water
- 0912 Data transferred from Huki Pau/ROV is synch w/ visual sept.
- Vof H is coming to the site today
 - told OH to call Huki on channel 10.
- 0930 ROV rigging basket
TOW 1 in standby
- 0945 Tow line float on surface
TOW 1 (Parker) approaching w/ lift balloon

18 July 2011 continued

1000 Tow boat #2 taking over
w/ lift balloon. Tow 1
was having difficulty.

1015 - Balloon lowered

1030 - Balloon on bottom

1043 - Balloon hooked up to
d-ring on basket!

1050 - Balloon w/ basket on
surface

1055 - VOG # on site
Eric Decarlo

1120 - Basket on deck

1130 - one of the 5" are
an old style bomb

1145 - Huki Pau Moving Location

1158 AN-M30 100lb GP Bomb
unfuzed

1230 1st cut made on 100lb Bomb
1550 steel is corroded,
explosives are crumbling
out during cutting

1240 ROV back in water

1245 JC King transferred
to Huki Pau

1237 ROV to basket #6

1428 Over 3 had a High
temperature alarm and
Rapid Burn. Over shutdown

18 July Continued

- 1428 with fan alarm.
- 1430 UofH approaching ROV location and vectored in from a safe location
- 1447 ROV @ Basket 6 the Basket flipped over
- 1508 UofH departs
- 1545 - Habib Pan moving
- 1720 ROV put in 2 3rd minutes in Basket and the will be recovered.
- 1730 over 3 Hezone ~~2~~
over 2 Hezone
over 6:7 - ^{NO HE} air layer
No recording of the cutting, operator error. Ovens dispose of 10 lbs He, 2.5 lbs of 80/20 Ametrol in 4 ovens.
- 1810 Day over - Hot wash on Pick. Spawar collects the metal sample.

19 July 2011

- 0600 Brief - Plan of the day
is to place 1 basket
fill the three on
the bottom. Dispose
of the mixture in
the DSV.
- 0755 Pre dive checks
Basket 3 set at
21 25, 595 158 12,020
- 0830 ROV at basket 3
no coral sitting upright
- 0900 Prepping lift balloons
on Hiki Pan so we
have two ready to
go.
- 0904 Treating 6.5 pounds
in 4 ovens. of the
80/20 Tot/Arnald
Running tests on ovens 1 & 5
w/new thermocouples.
- 0940: Cooking underway
- 0950 VofH in vicinity
will call when entering
the area of work
- 0951 Ovens 1, 2, 3 are not panning
up.
- 1025 oven 6 - flush
oven 7 continuing w/treatment

19 July Continued

1029 - Oven 7 flashed
crew will wait 30
minutes and then
reset the ovens.

1041 - Explosive operation ended

0600 - late Entry gave
" Carl 200 flares to
distribute to Waimai
Harbor.

1100 - 13lbs in oven 6 & 7 gone &
flash up. Oven 7 catch
damaged.

1110 UH vessel in exclusion
zone

Eric Decarlo

Jeff Jager

Michael Wong

Vilma Dupira

1132 UH leave our AOR

1320 Smoke on Oven 6 & 7

1330 10 rounds in Basket
3

1350 Oven 3 flamed @ 241°C

1434 13min remaining on oven
2

1537 Basket 3 - ~~5"~~ 2" 18
Munitions 18

1800 operation over for the
Day

20 July 2011

- 0600 - Morning Safety Brief
NVE on site also
and will go out this
am to prepare
- 0740 - start treatment on
all six ovens
- 0900 preparing to lift
Basket 3 on Hoki Pan.
also performing maintenance
on the burner.
- 917 oven 3 flash - very little
smoke
Oven 7 - Magnet Dwyer Door
opened with the inside
no flash or smoke.
Just a bad catch.
- 0927 Port air controller is
malfunctioning we will
overhaul the Raafit
for repair.
- 0940 - Speak w/ Pat Ross about
Building bracket for
NVE meter. ~~meter~~ substituted
of 2" aluminum $\frac{3}{16}$ " - $\frac{1}{4}$ " thick
is good.
- 1040 Late Entry
~~925~~ Oven 2 flash - 150°C

28 July cont

1256 - attach tow float

1314 - Tow line float on surface

1322 - Tow boat 2
attacking Lift B

1328 - Balloon on bottom
but fouled

1332 - Balloon down and
being attached to
the basket.

1351 - complete treatment
of 4 rounds (5")

1425 - Lift balloon on
surface

1530

~~1530~~ The balloon is at the DSV
RFB and Huke Pan crew (some)
are preparing to disembark.

1600 RSV operations continue
and

1700 Start recovery of ROV
munitions stage near
new basket location

1715 Start removing remaining
personnel from boats

1800 All personnel ashore
closing shop.

20110721

0600 Perform safety briefing

0630 Auvacs are mobilizing to
the boats

0825 Tow boat is at the
basket. Coordinates
2125.25 (Lat-Long)
15512.06

0845 Basket #3 dropped
Approx 2125.586
-15512.026

* @ 0840 auvacs started

5 auvacs running with 5" rounds
1 auvac is doing cutting water

0945 Prepping ROV to collect
small arms. Should be in
the water shortly

0953 ROV is at Basket 6 and
proceeding to collect small

1018 Attempting to vacuum
small arms with hose
and on ROV

1041 Switched from vacuum to
plastic scoop. That is working
better than the vacuum

1050 Auvac left damaged strip ^{of balloon} ^{by} ^{spared}
1112 1st basket of small arms filled
and transporting to Basket #6

20110721

- 1127 ~~bucket~~ bucket dumped in
basket heading back for refill
- 1134 still moving back to work
area
- 1135 DSU is still treating
5 5th minutes with
2 lbs each of Exp D
- 1140 Eric Decarlo called
Vof H will come out
again tomorrow.
They would like
to dive next week
if possible
- 1217 2nd Bucket of small arms
added to the basket
- 1238 filling 3rd Bucket
and adding 4 Round-7
Total in basket 6
- 1405 oven operation
completed.
ROU working on 4th
Sgal Bucket of small
arms
- 1415 - None of the 5th in
the oven are completely
trying to treat
at 180°C instead of
140°C.

21 July cont

1455 10 round plus
the 2 that were
in the Basket 6
and 3 buckets of
SAA - Round goes to
Anhi Tan

1541 Overrun 4, 2, 3 Burned
160°C 6, 7 are at
175°C & 213 - NO Burn

1550 Pulling ROV to
fix the Hopper.
B. Welder departs
Ryan w/ Sea Engineering
is in on the NVA
Bracketts.

1608 3 buckets of SAA
11 projects 12 attempted
3 already in Basket
14 total in Basket 6

22 July 2011 Friday

0600 Begin safety meeting

- JH will be in the area
- visitor traffic will be around today
- Huki needs drill bits
- Spencer needs to send drill from DSV to Huki

0712 Team is prepping the ROV

0758 Conducting pre fire checks

0848 J.C. King arrives on Huki fan

0855 DSV is cleaning the cutting tools and will be starting ovens later.

Charged scrap and contained in bag. Cut 3 additional 5" rounds + placed in trays

Placed 12 base plates and boosters in 2 ovens

0908 ROV is at basket 6 and is beginning recovery work.

0923 DSV ovens hot

0939 1st basket emptied into basket 6 bucket

0956 Restarted ovens without the cutting fluids.

1016 Electrical problems on DSV Aptus, Inc.

20110722

- 1025 ROV started filling 2nd bucket @ 10%
2nd bucket + 2nd proj's
being dumped into basket
- 1032 Hauling for round 3
- 1035 ovens 5, 6, 7 down due
to an SCR electrical issue
and ovens 1, 2 and 3 are
running.
- 1109 Oven door opened - rapid
burn
- 1113 Dumped 3rd Bucket
- 1121 Going back for 4th run
- 1128 Spoke with Spencer and told
him to notify Johnny
situation
- 1130 WUH Hilo Kai walked
huki pau to collect sample
- 1200 Hilo Kai done w/
hydrocasting samples,
requested a safe route
through area
- 1240 Dumped 4th Bucket
and 4th projectile
- 1344 tried restarting ovens
5, 6, 7 unsuccessful
- 1357 just run of ovens 1, 2, 3
were successful 3 5" round
cham

1509 Thermocouple on oven 1
is down

- 17 projectiles picked up today
basket 6 has 23 ordnance
items and 400 rounds of
small arms

1625 Barge is securing ops
for the day

1653 ROV recovered

1705 ROV crew coming in

1730 Hufv fan operations
at day's end

Ronald Brown

20110723 - Saturday

0600 Safety brief
visitors from Night
Vision jobs, Juxoco and
SPAWAR will all be
going out today

0630 Two Spanish guys head
out to the Hubir Pan

0715 NVL sensor is aboard the
Hubir Pan.

0718 Jift balloon has been
prepped and is ready to go
ROV is being readied for
Sunday's dives

0741 Jift balloon transferred
for / to tow boat

* The problem with the ovens is
a ground fault causing the system
to abort. We have an electrician
on board the DSV to make
repairs as instructed by the
engineers back in PT. Apparently
when the DSV tried to boil off
cutting water the high limblity
caused a ground fault in
the system

(over)

2011 07 23

- 0840 ROV is in the water
- 0903 Float on the surface
- 0914 Tow boat 2 is at basket
Lowering float
- 0919 Jift balloon deployed
- 0925 Hoohy up jift balloon to
basket
- 1031 fouled tow line ROV back
on board. Jift balloon is still
at the basket.
- 1025 Owens passed on check-out
electrician will be calling soon.
- 1040 ROV is back onboard Mahi
Pau.
- 1119 Thruster was fouled but ok
ROV will be going back in the
water
- 1216 Jift balloon is on the surface
- 1304 Basket # 6 on deck of DSV
segregating the small arms
from the basket. Then
stage the small arms for
disposal tomorrow
- 1409 ROV in water, deploying
OH camera
- 1445 OH camera deployed to
A and VIT personnel needed to
harbor.

2011 07 23

~~1630~~ DSV crew on land
1635 ROV ops shut down
1640 ops done for day

24 July 2011

- 0600 Perform safety brief
0749 Conducting pre dive checks
0809 ROV is in the water
0850 Back at basket 3 for the second time. Using basket 3 at same location
0900 Collected 1st item
0907 Collected 2nd item
0914 Collected 3rd item
0949 Cooking small arms
1110 Ground fault bus shut down ovens 5, 6 and 7
1113 Team is testing ordnance item #4
There is a test issue
1137 ovens are still down Spencer is trying to reach Chuck + Brian for them to figure out the best fix
1219 Small arms run completed
1225 SAA runs for the day are completed the guys are preparing 5, 6 and 7 for tomorrow
1230 ROV is working on the 4th round
1253 Just grabbed ~~the~~ DMM, piece # 7 and now going after #8.
1257 Oven 5 continues to default 6 & 7 run normally #5 will be

24 July 2011

excluded from tomorrow's runs

1344 Picking up ordnance piece #9

1348 Spunter and large crew in the ops area gave me a disk

1400 ROV back on the Huk's Pan for a sensor adjustment

1425 ROV is back in the water

1525

1547 eleven pieces have been collected by the ROV.

1715 ARA Crew is coming off the Huk's Pan

1740 Everyone from ARA is on the beach. End of collection and dummy operation

25 July 2011

0600 Morning safety briefing

0615 Everyone to loading
for the boats or their other
operating stations.

0708 Call Butch to
have tow boat 1 at
pier to pick up the
extra life/safety vests

0716 ROV in water

0725 Recovered 1st wand of
the day

0730 - Status Update

135 attempted 63 recovered.

SI delivered (Huki w/ ROV)

DSV = 1 100 lb bomb, 12

5' AP, & 500 SAA - 81 JA

0730 - ROV Item 2

0734 - ROV Item 3

0743 - 3 added to Basket 15 total

0755 - Items 4 & 5

0821 - Recovered Item 6

0858 - Picked up 7 & 8

0932 - Picked up 9 & 10

0940 - USACE HI Disturb
on site

0945 - Picked up # 11 R^S #16

1015 - USACE goes to vessel
Patt, Lou Hudson, JC,
Farley, Deann,

1100 - USACE visitors on
25th cat. Huki Pau.

1132 - ROV out of water
and on Huki Pau

1140 - 5" illumination round
flushed in

2-5" AP rods also had a
Repair Burn in oven

1143 Visitors from HI District
Depart the Huki Pau

1245 overide run on
ovens - over temp
problems. Now Back
on track.

1320 over 2 overtemped

1331 JH camera removed
from water - ROV on
Deck.

1511 over ops completed
ROV in water for
lift & tow of
26 items Bucket #3

1550 balloon attached

1600 lifted

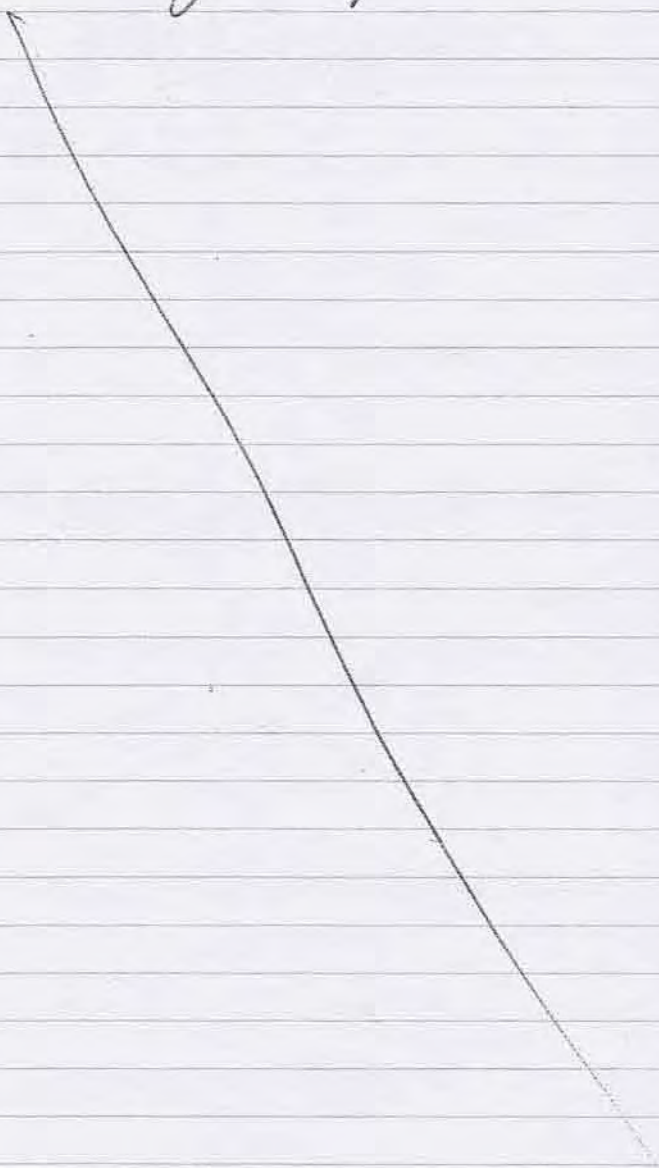
1630 balloon to DSU
26 overhauled

1710 RSV crew calls it a

Day



1730 Ballrooms moving
back to RSV
1800 Day complete



7/26/11

0500 Demul Barge safety
Brief w/ Spencer
Herald, Kevin, Len &
and

0530 on Barge

0630 cutting begun

0600 safety Brief -
chief boats warn
not to approach
DSV and that they
are cutting

0834 - Ovens loaded 13.5" AP
1-5" HE 7lbs New
Per oven

No Oven 7 9.04 lbs
Oven 4 - Oven 1, 2, 3, 6 ~~6~~ 3 Ap's each
Oven 5 empty

1030 - oven 1 fault - no flash
Oven 2 is lagging behind
and heating slower

1100 - ROV's prepping for recovery
of Basket. also rigging
new shovel for
small arms recovery
- will survey the area

1107 Oven 3 cycle fault process
aborted 90 min into soak
Oven 2 fault did not reach
soak.

→ 27 Jul 2011 158161389-3994

0600 Safety Brief

0700 Start oven₂

0727 Oven 3 High temp
1 1/2 still running
Smoke from 3 also

0715 Rev at Basket the
Basket is Right side
up - begin collecting
sa

0830 Oven 1 Door open
no spike in temp

0834 Oven 2 High temp
alarm/smoke.

0920 - 2 MK² MOD off - 19.5 lbs
of propellant

1130 oven 5 are done
for 1st run
32 lbs + 4.4 lbs TNT
29 lbs of propellant.

1251 start treatment
- 1 TNT ~ 216
2 19 lbs TNT 3, 6 & 7
3

1330 Paul Kao of DOTT
on site

30

7/26/11 Continued

1147 Over 7 complete

1 2 3 good

1230 JCE & JFC go
to Pter tent

see DSU ops

1348 Return from DSU

all overns look good

#5 still down but

crew is working in

- Huki Paw start ~~run~~

lift operations

1507 Basket on surface

1600 Basket Fat Boye

contains 3- 1100 lb

Bonker remaining on

Board one 25-5" 20

3- 5" Jllow, 2 40 lb 6

Propellant from 2 4" cartid

cases & 32 lbs of TNT

1700 - Day Done

27 July cont

1324 Ovens flushed

1411 Some warning is needed

1500 Damage electron

1600 Frank Zienker

Bridge for inspection

Needs BAF-2

32 Amp for 600 volts

1700 - vessel / ROV ops end

28 July 2011

0600 Safety briefing

0615 Crew heads off to the boats

0700 At Ops, using ARA-Safety's radios until the door is open to office

0715 Go over records with Rob George of Spawar

0730 (about) Rob George heads out to Huk's fan to Ping 'Items

0745 Porch and office are open

1100 Rob George calls in that he had some successful tests and his work is accomplished. He will collect the pyrotechnic items from the test basket on the DSV tomorrow.

1200 - 1350 finished burns. Cleaned up remaining information from yesterday. materials that were not burned/brated yesterday.

2 trays had liquid in the liquid TNT, so there was

28 July 2011
on ~~explosion~~ ^{explosion}, ~~one~~ fire
port side and starboard side
temperatures may have reached
1000 degrees.

1410 John Coughlin and Batch
Craig head out to DSV.

1530 Batch at Huki Pan
Coughlin back at the CP.

1613 ROV in the water

1617 ROV at the basket.

1638 Balloon is hooked to the
basket D Ring.

1647 Tow float deployed.

1651 Pulling the pin

1652 On the surface

7/29/11

0600 Safety Brief
VH camera to
be deployed by
ROV.

0900 1/2 way through
cutting all the
muntun - No Disc Borets

0915 ROV in water
with VH camera

1055 clearing sawn
ovens 3x7 loaded
will start after
clean up. 3x7 has
3-5" AP's in each
oven - 6 total.

1249 JK + Senia go out to
Huki Pan

1210-1220 late enter - smooth
from oven 7x3

1412 Start oven 7x3 with
3-5" AP's in each.

1600 End of Operations

Saturday 30 July 2011

- 0600 Morning safety meeting
some crew's already headed
for the mainland
- 0630 Called Gyndex about
shipping Samantha will
attempt to get a truck for
pick up at Sea Engineering
the afternoon of Tuesday
2 August by Gyndex, our
shipping company.
- 0747 Huki Pau's 4 anchors
are on deck
- 0818 ROV in the water
- 0845 John is on board the
Huki Pau.
- 080 DSV went hot at ON
small arms
- 1050 All 4 anchor locations filmed
bringing OH camera out of the
water
- 1100 ROV on board Huki Pau
- 1235 Ovens 3 & 7 have
2 Popping "trays" each
approximately 800 rounds
- 1600 complete

31 July #

0600 Brief

Treating SAA at ~~100~~ ext
800 rounds

1103 SAA did not finish
re-manning the batch

1427 all SAA have been
Treated.

1 Aug 11

0600 Safety Brief
DSU operation today

Treaty 10-5" pipes

1012 1st run complete

Treaty 6 AP 5" s

2 401b Frag banks

1300 Run Complete

1500 all operations
completed

-note one Dive
vessel/contractor was
not responsive and
gave Karl some grief

2 Aug 11

0600 Safety Brief
only DSV operation
Today

0900 Treater 5-5" illum
rounds, 1-4" propellant
cartridge and 3-1.1"
propellant cartridges

1100 all DSV operation
completed and
personnel off vessel

1400 Meet w/ Recycler 5" APs
can not be shredded
- 20 contams w/ Rev stopped

3 Aug 11

DSV moved to Pearl H.
Day off for
crew

4 Aug 11

- Meet w/ JC King
Representative Jo Jordan
Howard Killian
Professor Eric DeCarlo
Noda's Rob Conner
to film Public Access
TV show 1030-2pm
- Meet w/ DEI - Charles
will rent a Plasma
torch to score/cut
the 5" rounds to
further detail them
- Frank, Sam, Ryan, &
Kevin Pack and
Clean Shipping containers

Standard Approach Cost Model

	Loaded Rate	Dive Mobilization					Dive Operational Costs				
		hours/day	days/week	weeks			hours/day	days/week	weeks		
QC	\$128.73	10	2	2	1	\$5,149.16	10	5	2	14	\$185,755.99
Tech 2	\$76.39	10	2	6	1	\$9,166.68	10	5	6	14	\$330,687.88
Engineer	\$128.73	10	2	0	1	\$0.00	0	0	0	0	\$0.00
Admin	\$58.51	0	2	0	0	\$0.00	0	0	0	0	\$0.00
Program manager	\$168.78	0	5	0	0	\$0.00	0	0	0	0	\$0.00
Project manager	\$147.45	10	5	1	1	\$7,372.66	10	5	1	14	\$106,387.52
Perdiem	\$293.00	1	4	9	1	\$10,548.00	1	7	9	14	\$258,426.00
Vehicle	\$1,260.22	1	1	3	1	\$3,780.65	3	1	1	14	\$54,554.75
Shipping	\$52,509.00	1	1	1	1	\$52,509.00	0	0	0	0	\$0.00
Vessels	\$7,114.97	1	3	1	1	\$21,344.91	1	101	1	1	\$718,611.92
ODCs	\$26,254.50	1	1	0	1	\$0.00	1	1	1	1	\$26,254.50
Flights	\$1,369.80	1	1	9	1	\$12,328.20	0	0	0	0	\$0.00
Labor						\$21,689					\$622,831
Travel						\$75,385					\$258,426
ODCs						\$0					\$1,057,847
Subcontractors						\$21,345					
Summation						\$118,419					\$1,680,679