

# Analyzing the Potential Impacts to Cultural Resources at Significant Sand Extraction Sites

## Volume III: Appendixes



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## **APPENDIX A: SB P1 MAGNETOMETER DATA**



**SB P1 Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Assoc.</b>	<b>Cultural Resource Potential</b>
005-1-dp-72.1g-168.5f	2559645.3	372015.2	5	1	Dipolar	72.1g	168.5f	Moderate Single Object	None	Low
007-1-nm-13g-270.1f	2559673.1	371189.9	7	1	Negative Monopolar	13g	270.1f	Moderate Single Object(s)	None	Low
015-1-dp-8.4g-99f	2559113.8	372213.2	15	1	Dipolar	8.4g	99f	Small Single Object	None	<b>Wire Rope</b>
016-1-dp-592.7g-131f	2559034.7	372190.2	16	1	Dipolar	592.7g	131f	High Intensity Single Object	None	<b>Wire Rope</b>
017-1-dp-52.4g-128.6f	2558994.8	372169.6	17	1	Dipolar	52.4g	128.6f	Moderate Single Object	None	<b>Wire Rope</b>
018-1-pm-6.2g-172.7f	2558969.9	372166.3	18	1	Positive Monopolar	6.2g	172.7f	Small Single Object	None	<b>Wire Rope</b>
020-1-dp-12.1g-244.8f	2559039.7	371062.3	20	1	Dipolar	12.1g	244.8f	Moderate Single Object	None	Low
026-1-nm-13.1g-280.4f	2558744.3	370975.6	26	1	Negative Monopolar	13.1g	280.4f	Moderate Single Object(s)	None	Low
031-1-nm-13.1g-272f	2558501.2	371083.3	31	1	Negative Monopolar	13.1g	272f	Moderate Single Object(s)	None	Low
100-1-nm-20.5g-295.9f	2558999.2	372085.6	100	1	Negative Monopolar	20.5g	295.9f	Moderate Single Object(s)	None	<b>Wire Rope</b>





## **APPENDIX B: SB P1 SIDESCAN SONAR DATA**

**SB P1 Sidescan Sonar Data**

<b>Sonar Target*</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SS 001: 152	2559695.58	373448.34	Small Single Object	No	Low
SS 002: 126	2559289.68	373410.75	Rectangular Feature	No	Low
SS 003: 127	2558718.44	370890.12	Linear Object	No	Low

\*Page number for sidescan sonar contact sheet

## APPENDIX C: SB P2 MAGNETOMETER DATA

### SB P2 Magnetometer Data

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
001-1-nm-22.6g-241.4f	2561803.8	374913.8	1	1	Negative Monopolar	22.6g	241.4f	Moderate Ferrous Object(s)	No	Moderate
001-2-mc-91.4g-73.5f	2562233.8	373056.6	1	2	Multi-component	91.4g	73.5f	Moderate Ferrous Object(s)	No	Moderate Buffer B
002-1-dp-62g-188.6f	2562252.5	372865.6	2	11	Dipolar	62g	188.6f	Moderate Ferrous Object(s)	No	Moderate Buffer B
003-1-nm-9.4g-337.6f	2562123.3	373236.1	3	1	Negative Monopolar	9.4g	337.6f	Moderate Single Object	No	Moderate Buffer B
003-2-mc-61.7g-248.4f	2562191.9	372888.2	3	2	Multi-component	61.7g	248.4f	Moderate Ferrous Object(s)	No	Moderate Buffer B
004-1-nm-17.3g-155.9f	2562174.7	372885.5	4	1	Negative Monopolar	17.3g	155.9f	Moderate Ferrous Object(s)	No	Moderate Buffer B
010-1-nm-13g-317.4f	2561521.6	374227.6	10	1	Negative Monopolar	13g	317.4f	Moderate Single Object	No	Low
015-1-pm-2.5g-186.4f	2561419.1	373731.9	15	1	Positive Monopolar	2.5g	186.4f	Small Ferrous Object	No	High Buffer A
016-1-dp-67.2g-279.5f	2561345.3	373759.4	16	1	Dipolar	67.2g	279.5f	Moderate Ferrous Object(s)	No	High Buffer A
017-1-dp-220.9g-175.2f	2561311.7	373757.9	17	1	Dipolar	220.9g	175.2f	Large Ferrous Object(s)	No	High Buffer A
018-1-pm-69.3g-92.9f	2561228.5	373777.2	18	1	Positive Monopolar	69.3gg	92.9f	Moderate Ferrous Object(s)	No	High Buffer A
019-1-nm-12.1g-87.4f	2561175.6	373795.5	19	2	Negative Monopolar	12.1g	87.4f	Moderate Ferrous Object(s)	No	High Buffer A
020-1-nm-113g-123.9f	2561123.4	373807.9	20	1	Negative Monopolar	113g	123.9f	Moderate Ferrous Object(s)	Possible Association with SS 002	High Buffer A

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
020-2-dp-30.5g-41.3f	2561262.1	373168.3	20	2	Multi-component	30.5g	28.3f	Small Single Object	No	Low
021-1-nm-14.8g-142f	2561086.5	373780.4	21	1	Negative Monopolar	14.8g	142f	Moderate Ferrous Object(s)	No	High Buffer A
021-2-nm-15.6g-58f	2561226.9	373174.1	21	2	Negative Monopolar	15.6g	58f	Small Single Object	No	Low
021a-1-nm-34.1g-278f	2561101.1	373801.6	21	1	Negative Monopolar	34.1g	278f	Moderate Ferrous Object(s)	Possible Association with SS 002	High Buffer A
100a-1-pm-155.6g-81.8f	2561297.7	373746.4	100A	1	Positive Monopolar	155.6g	81.8f	Moderate Ferrous Object(s)	No	High Buffer A
101a-1-nm-109.5g-149.2f	2561141.7	373806.7	101a	1	Negative Monopolar	109.5g	149.2f	Moderate Ferrous Object(s)	No	High Buffer A
101b-1-mc-69.9g-110.7f	2561090.6	373817.1	101b	1	Multi-component	69.9g	110.7f	Moderate Ferrous Object(s)	Possible Association with SS 001	High Buffer A



## **APPENDIX D: SB P2 SIDESCAN SONAR DATA**

### SB P2 Sidescan Sonar Data

Sonar Target*	X Coordinate	Y Coordinate	Assessment	Anomaly Association	Cultural Resource Potential
SS 001: 128	2560964.1	374839.2	Small Single Object	No	Low
SS 002: 129	2561104.1	373837.8	Bottom Surface Feature Cluster	101b-1, 20-1 and 21a-1	High Buffer A

\*Page number for sidescan sonar contact sheet

## **APPENDIX E: SB P3 MAGNETOMETER DATA**

### SB P3 Magnetometer Data

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
008-1-pm-80.6g-88.8f	2605491.7	373983.8	8	1	Positive Monopolar	80.6g	88.8f	Moderate Object(s)	SSS 002	High Buffer A
009-1-nm-33.2g-174.9f	2604793.1	374186.5	9	1	Negative Monopolar	33.2g	174.9f	Moderate Object(s)	No	High Buffer A
010-1-nm-100.7g-154.2f	2604764.3	374171.3	10	1	Negative Monopolar	100.7g	154.2f	Moderate Object(s)	No	High Buffer A
011-1-pm-28.8g-104.7f	2604771.1	374091.1	11	1	Positive Monopolar	28.8g	104.7f	Moderate Object(s)	No	High Buffer A
012-3-pm-13g-34.2f	2605102.1	373922.2	12	3	Positive Monopolar	13g	34.2f	Small Object(s)	No	High Buffer A
012-2-nm-63g-222.2f	2603671.5	374472.4	12	2	Negative Monopolar	63g	222.2f	Large Object	No	Modern Vessel
012-4-pm-16g-52.7f	2605186.6	373874.6	12	4	Positive Monopolar	16g	52.7f	Small Object(s)	No	High Buffer A
012-1-dp-87.3g-143.6f	2602418.5	374968.7	12	1	Dipolar	87.3g	143.6f	Moderate Object(s)	No	High Buffer C
013-3-pm-13.5g-64.4f	2605176.5	373876.1	13	3	Positive Monopolar	13.5g	64.4f	Small Object(s)	No	High Buffer A
013-2-nm-305.6g-354.3f	2603615.9	374463.1	13	2	Negative Monopolar	305.6g	354.3f	Large Object	SSS 014 Vessel	Modern Vessel
013-1-dp-30.8g-182.9f	2602412.4	374960.1	13	1	Dipolar	30.8g	182.9f	Moderate Object(s)	No	High Buffer C
014-2-dp-31g-74.5f	2604735.8	373956.6	14	2	Dipolar	31g	74.5f	Small Object	No	High Buffer A
014-1-dp-1681.1g-379f	2603622.4	374392.6	14	1	Dipolar	1681.1g	379f	Large Object	SSS 014 Vessel	Modern Vessel
014-3-pm-46.7g-61.5f	2605347.7	373750.3	14	3	Positive Monopolar	46.7g	61.5f	Small Object(s)	SSS 012	High Buffer A
015-3-dp-56.9g-75.9f	2604847.5	373884.8	15	3	Dipolar	56.9g	75.9f	Small Object(s)	SSS 012	High Buffer A
015-1-dp-327.5g-396.6f	2603572.8	374379.3	15	1	Dipolar	327.5g	396.6f	Large Object	SSS 014 Vessel	Modern Vessel
015-2-dp-20g-73.8f	2604101.3	374169.6	15	2	Dipolar	20g	73.8f	Small Object	No	Low
016-2-pm-21.5g-53.6f	2604845.9	373837.1	16	2	Positive Monopolar	21.5g	53.6f	Small Ferrous Object	No	High Buffer A

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
016-3-dp-10g-44.9f	2605165.2	373690.6	16	3	Dipolar	10g	44.9f	Small Ferrous Object	No	High Buffer A
016-1-pm-73.3g-281.6f	2603607.9	374325.1	16	1	Positive Monopolar	73.3g	281.6f	Large Object	No	Modern Vessel
017-1-pm-18.4g-73f	2603507.5	374264.5	17	1	Positive Monopolar	18.4g	73f	Large Object	No	Modern Vessel
018-1-nm-229.5g-252.1f	2602440.3	374673.5	18	1	Negative Monopolar	229.5g	252.1f	Large Object(s)	No	High Buffer B
019-2-nm-245.6g-169.3f	2605186.9	373509.6	19	2	Negative Monopolar	245.6g	169.3f	Large Object(s)	SSS 010	High Buffer A
019-1-pm-51.5g-110.3f	2602407.2	374625.4	19	1	Positive Monopolar	51.5g	110.3f	Large Object(s)	No	High Buffer B
020-2-dp-409g-277.2f	2605153.1	373499.6	20	2	Dipolar	409g	277.2f	Large Object(s)	SSS 010	High Buffer A
020-1-dp-459g-182.7f	2604732.3	373605.9	20	1	Dipolar	459g	182.7f	Large Object(s)	SSS 006	High Buffer A
021-1-dp-376.2g-225.3f	2604738.8	373605.3	21	1	Dipolar	376.2g	225.3f	Large Object(s)	SSS 006	High Buffer A
021-2-pm-20.7g-42.5f	2606009.3	373104.8	21	2	Positive Monopolar	20.7g	42.5f	Moderate Object(s)	No	Moderate
022-1-nm-196.9g-172.4f	2604778.6	373509.8	22	1	Negative Monopolar	196.9g	172.4f	Large Object(s)	SSS 007 and SSS 008	High Buffer A
022-2-nm-1122.2g-204.1f	2604926.8	373461.7	22	2	Negative Monopolar	1122.2g	204.1f	Large Object(s)	SSS 009	High Buffer A
022-4-dp-33g-51f	2605495.5	373231.6	22	4	Dipolar	33g	51f	Small Object(s)	No	High Buffer A
022-3-nm-90.9g-52.3f	2605399.9	373267.4	22	3	Negative Monopolar	90.9g	52.3f	Large Object	No	High Buffer A
023-1-dp-1824.8g-165.6f	2604771.8	373483.7	23	1	Dipolar	1824.8g	165.6f	Large Object(s)	SSS 007 and SSS 008	High Buffer A
023-2-dp-975g-160.3f	2604915.5	373428.4	23	2	Dipolar	975g	160.3f	Large Object(s)	SSS 009	High Buffer A
023-3-dp-63.6g-96.4f	2605482.1	373215.8	23	3	Dipolar	63.6g	96.4f	Moderate Ferrous Object	No	High Buffer A
025-1-nm-252.6g-117.1f	2604968.1	373278.9	25	1	Negative Monopolar	252.6g	117.1f	Large Object(s)	No	High Buffer A
025-2-nm-18.5g-51.7f	2605178.1	373193.9	25	2	Negative Monopolar	18.5g	51.7f	Large Object(s)	No	High Buffer A

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
026-1-pm-20.8g-80.6f	2604937.6	373241.1	26	1	Positive Monopolar	20.8g	80.6f	Large Object(s)	No	High Buffer A
026-2-pm-10.6g-36.4f	2605952.4	373206.4	26	2	Positive Monopolar	10.6g	36.4f	Small Object	No	Low
026-3-dp-559g-168.2f	2605149.1	373172.6	26	3	Dipolar	559g	168.2f	Large Object(s)	No	High Buffer A
100-1-nm-18.6g-113.4f	2601910.9	373215.8	100	1	Negative Monopolar	18.6g	113.4f	Small Object	No	Low Out of Area
100-3-pm-10.5g-127.3f	2602486.3	374938.3	100	3	Positive Monopolar	10.5g	127.3f	Moderate Object(s)	No	High Buffer C
100-2-nm-79.4g-94f	2602406.1	374669.7	100	2	Negative Monopolar	79.4g	94f	Large Object(s)	No	High Buffer B
101-1-dp-210.9g-98.1f	2603015.3	373747.9	101	1	Dipolar	210.9g	98.1f	Moderate Single Object	No	Low Out of Area
102-1-dp-12g-64f	2604135.1	374163.1	102	1	Dipolar	12g	64f	Small Single Object	No	Low
103-1-dp-60.4g-219.2f	2604801.1	373435.6	103	1	Dipolar	60.4g	219.2f	Large Object(s)	No	High Buffer A
104-1-pm-13.2g-96.6f	2605155.5	371664.9	104	1	Positive Monopolar	13.2g	96.6f	Small Single Object	No	Low Out of Area
020b-1-nm-211.3g-126.2f	2604773.3	373625.4	020b	1	Negative Monopolar	211.3g	126.2f	Large Object(s)	No	High Buffer A
020b-2-pm-107.4g-133.1f	2605182.8	373464.3	020b	2	Positive Monopolar	107.4g	133.1f	Large Object(s)	SSS 010	High Buffer A
020b-3-mc-128g-113f	2606033.5	373103.4	020b	3	Multi-component	128g	113f	Moderate Object(s)	No	Moderate



## **APPENDIX F: SB P3 SIDESCAN SONAR DATA**

### SB P3 Sidescan Sonar Data

Sonar Target*	X Coordinate	Y Coordinate	Assessment	Anomaly Association	Cultural Resource Potential
SSS 01: 130	2604940.7	373985.68	Rectangular Object Amid Depressions	No	High Buffer A
SSS 02: 131	2605482.45	373984.09	Small Linear Object	008-1	High Buffer A
SSS 03: 132	2605551.38	373938.68	Small Square Object	No	High Buffer A
SSS 04: 133	2605461.8	373647.83	Possible Anchor and Cable or Chain	Buoy G3	Low
SSS 05: 134	2605410.94	373662.51	Possible Anchor and Cable or Chain	Buoy G3	Low
SSS 06: 135	2604719.69	373592.01	Crescent Shaped Object	020-1 and 021-1	High Buffer A
SSS 07: 136	2604753.4	373484.24	Crescent Shaped Object	022-1 and 023-1	High Buffer A
SSS 08: 137	2604753.4	373484.24	Rectangular Object Amid Depressions	022-1 and 023-1	High Buffer A
SSS 09: 138	2604904.4	373446.34	Rectangular Object Amid Depressions	022-2 and 023-2	High Buffer A
SSS 10: 139	2605182.31	373485.24	Rectangular Object Amid Depressions	019-2, 020-2 and 020b-2	High Buffer A
SSS 11: 140	2605453.24	373625.44	Possible Clump and Cable or Chain	Buoy G3	Low
SSS 12: 141	2604780.88	373917.89	Rectangular Object	014-2 and 015-3	High Buffer A
SSS 13: 142	2604837.77	373406.39	Rectangular Object	No	High Buffer A
SSS 14: 143	2603616.77	374414.46	<b>Modern Vessel</b>	013-2, 014-1 and 015-1	Low

\*Page number for sidescan sonar contact sheet

## **APPENDIX G: SB S1 MAGNETOMETER DATA**

### SB S1 Magnetometer Data

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
018-1-mc-22.8g-211.5f	2468648.4	338259.1	18	1	Multi-component	22.8g	211.5f	Charted Pipeline	No	No
018-2-nm-4.9g-214.8f	2468663.2	335010.5	18	2	Negative Monopolar	4.9g	214.8f	Small Single Object	No	Low
022-1-pm-83.4g-113.3f	2468439.7	338041.9	22	1	Positive Monopolar	83.4g	113.3f	Charted Pipeline	No	No
025-1-dp-64.8g-186f	2468286.6	337924.6	25	1	Dipolar	64.8g	186f	Charted Pipeline	No	No
026-1-dp-48.4g-213.1f	2468266.3	337941.6	26	1	Dipolar	48.4g	213.1f	Charted Pipeline	No	No
027-1-dp-21g-387f	2468217.4	337905.3	27	1	Dipolar	21g	387f	Charted Pipeline	No	No
027-2-dp-15.7g-204.6f	2468217.3	337168.7	27	2	Dipolar	15.7g	204.6f	Bottom Surface Debris	SSS 01 SSS 02	High Buffer B
027-3-nm-19.2g-200.1f	2468186.2	334868.8	27	3	Negative Monopolar	19.2g	200.1f	Moderate Object(s)	No	Moderate Buffer A
028-1-dp-39.1g-219f	2468164.5	337846.5	28	1	Dipolar	39.1g	219f	Charted Pipeline	No	No
028-2-dp-98g-179.7f	2468169.5	337169.2	28	2	Dipolar	98g	179.7f	Bottom Surface Debris	SSS 01 SSS 02	High Buffer B
029-1-nm-49.5g-219f	2468114.2	337795.8	29	1	Negative Monopolar	49.5g	219f	Charted Pipeline	No	No
029-2-nm-22.1g-100.6f	2468100.9	334901.5	29	2	Negative Monopolar	22.1g	100.6f	Moderate Object(s)	No	Moderate Buffer A
030-1-dp-37.7g-213.3f	2468069.6	337757.7	30	1	Dipolar	37.7g	213.3f	Charted Pipeline	No	No
030-2-dp-17.5g-149.7f	2468068.1	334895.1	30	2	Dipolar	17.5g	149.7f	Moderate Object(s)	No	Moderate Buffer A

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
031-1-dp-43.6g-328f	2468016.5	337731.1	31	1	Dipolar	43.6g	328f	Charted Pipeline	No	No
031-2-nm-14.6g-464f	2468013.4	336996.6	31	2	Negative Monopolar	14.6g	464f	Moderate Object(s)	SSS 003 SB 001	Modern Debris
031-3-dp-11.8g-117.5f	2468015.8	335366.4	31	3	Dipolar	11.8g	117.5f	Small Single Object	No	Low
032-1-dp-47.2g-358.3f	2467971.1	337652.7	32	1	Dipolar	47.2g	358.3f	Charted Pipeline	No	No
032-2-nm-25.9g-382.9f	2467970.4	336998.9	32	2	Negative Monopolar	25.9g	382.9f	Large Object(s)	SSS 003 SB 001	Modern Debris
033-1-nm-117.9g-199.9f	2467927.1	337631.1	33	1	Negative Monopolar	117.9g	199.9f	Charted Pipeline	No	No
033-2-mc-84.6g-447.6f	2467915.8	336998.1	33	2	Multi-component	84.6g	447.6f	Large Object(s)	SSS 003 SB 001	Modern Debris
034-1-mc-25.2g-142f	2467840.5	337540.1	34	1	Multi-component	25.2g	142f	Charted Pipeline	No	No
034-2-mc-2032.2g-294.9f	2467837.3	336940.4	34	2	Multi-component	2032.2g	294.9f	Large Object(s)	SSS 003 SB 001	Modern Debris
035-1-pm-83g-89.1f	2467799.2	337502.8	35	1	Positive Monopolar	83g	89.1f	Charted Pipeline	No	No
035-2-mc-2802.4g-297.9f	2467810.2	336956.2	35	2	Multi-component	2802.4g	297.9f	Large Object(s)	SSS 003 SB 001	Modern Debris
036-1-nm-50.8g-123.6f	2467749.1	337441.3	36	1	Negative Monopolar	50.8g	123.6f	Charted Pipeline	No	No
036-2-mc-355.8g-383.3f	2467747.4	336964.5	36	2	Multi-component	355.8g	383.3f	Large Object(s)	SSS 003 SB 001	Modern Debris
037-1-dp-43.9g-269.7f	2467692.2	337399.1	37	1	Dipolar	43.9g	269.7f	Charted Pipeline	No	No
037-2-dp-55.4g-595.9f	2467688.2	337008.9	37	2	Dipolar	55.4g	595.9f	Large Object(s)	SSS 003 SB 001	Modern Debris

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
038-1-dp-84.3g-562.5f	2467653.8	337352.7	38	1	Dipolar	84.3g	562.5f	Charted Pipeline	No	No
038-2-pm-23.2g-357.3f	2467646.9	337007.3	38	2	Positive Monopolar	23.2g	357.3f	Large Object(s)	SSS 003 SB 001	Modern Debris
039-1-pm-80.8g-220.1f	2467604.7	337311.2	39	1	Positive Monopolar	80.8g	220.1f	Charted Pipeline	No	No
040-1-dp-80.7g-223.2f	2467552.5	337271.4	40	1	Dipolar	80.7g	223.2f	Charted Pipeline	No	No



## **APPENDIX H: SB S1 ACOUSTIC DATA**

### SB S1 Acoustic Data

Acoustic Target*	X Coordinate	Y Coordinate	Assessment	Anomaly Association	Cultural Resource Potential
SS 001: 144	2468169.94	337144.88	Concentration of Small Objects	027-2 and 028-2	High Buffer B
SS 002: 145	2468175.45	337144.27	Concentration of Random Objects	027-2 and 028-2	High Buffer B
SS 003: 146	2467812.3	336955.56	Complex Structure Scatter Amid Depressions	034-2 and 035-2	Low
SB 003: 147	2467812.3	336955.56	Depression and Object Associated with SS 003	034-2 and 035-2	Low

\*Page number for sidescan sonar/subbottom contact sheet

## **APPENDIX I: SB S2 SE MAGNETOMETER DATA**

**SB S2 SE Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Assoc.</b>	<b>Cultural Resource Potential</b>
051-1-nm-631.8g-373.1f	2507055.1	360352.8	51	1	Negative Monopolar	631.8g	373.1f	Large Object(s)	None	Charted Pipeline
051b-1-dp-11.9g-301.9f	2507020.9	360606.9	051b	1	Dipolar	11.9g	301.9f	Moderate Single Object	None	Small Single Object
052-1-dp-914.2g-219.3f	2506953.9	360176.2	52	1	Dipolar	914.2g	219.3f	Large Object(s)	None	Charted Pipeline
053-1-mc-1259.4g-343.9f	2506936.4	360159.1	53	1	Multi-component	1259.4g	343.9f	Large Object(s)	None	Charted Pipeline
054-1-dp-113.8g-230.1f	2506872.7	361138.9	54	1	Dipolar	113.8g	230.1f	Large Object(s)	None	Modern Trawler Remains
054-2-mc-184.7g-333.4f	2506850.1	360033.1	54	2	Multi-component	184.7g	333.4f	Large Object(s)	None	Charted Pipeline
055-1-pm-3465.3g-93.2f	2506828.4	361124.9	55	1	Positive Monopolar	3465.3g	93.2f	Large Object(s)	None	Modern Trawler Remains
056-1-dp-2154.4g-160.7f	2506793.1	361121.6	56	1	Dipolar	2154.4g	160.7f	Large Object(s)	None	Modern Trawler Remains
057-1-nm-12.5g-218.1f	2506696.9	362021.2	57	1	Negative Monopolar	12.5g	218.1f	Moderate Single Object(s)	None	Moderate Buffer A
057-2-dp-22.9g-395.1f	2506712.2	361938.4	57	2	Dipolar	22.9g	395.1f	Large Object(s)	None	Moderate Buffer A
057-3-dp-22.9g-364.7f	2506710.3	361097.3	57	2	Dipolar	22.9g	364.7f	Large Object(s)	None	Modern Trawler Remains
058-1-mc-361.1g-262.5f	2506680.7	359762.1	58	1	Multi-component	361.1g	262.5f	Large Object(s)	None	Charted Pipeline
060-1-dp-59.4g-107.9f	2506562.1	361359.1	60	1	Dipolar	59.4g	107.9f	Moderate Single Object	None	Low
061-1-nm-12.2g-192.8f	2506466.6	362101.8	61	1	Negative Monopolar	12.2g	192.8f	Moderate Single Object(s)	None	Low
061-2-nm-26.5g-204.4f	2506499.3	361571.7	61	2	Negative Monopolar	26.5g	204.4f	Moderate Single Object(s)	None	Low
200-1-dp-7680.9g-116.4f	2506766	361096.2	200	1	Dipolar	7680.9g	116.4f	Large Object(s)	None	Modern Trawler Remains

## **APPENDIX J: SB S2 SE SIDESCAN SONAR DATA**

**SB S2 SE Sidescan Sonar Data**

<b>Sonar Target*</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SS 001: 148	2506753.4	362241.2	Linear Object	No	Moderate

\*Page number for sidescan sonar contact sheet

## **APPENDIX K: SB S2 NW MAGNETOMETER DATA**

**SB S2 NW Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Assoc.</b>	<b>Cultural Resource Potential</b>
106-1-pm-13.5g-56f	2504326.9	363174.4	106	1	Positive Monopolar	13.5g	56f	Small Single Object	None	Low
107-1-pm-101.3g-87.6f	2504275.8	362598.4	107	1	Positive Monopolar	101.3g	87.6f	Moderate Object(s)	None	High Buffer A
108-1-dp-107.2g-144.7f	2504232.3	362587.9	108	1	Dipolar	107.2g	144.7f	Moderate Object(s)	None	High Buffer A
109-1-pm-322.9g-58.8f	2504153.2	362535.8	109	1	Positive Monopolar	322.9g	58.8f	Moderate Object(s)	None	High Buffer A



## **APPENDIX L: SB S3 NE MAGNETOMETER DATA**

### SB S3 NE Magnetometer Data

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Assoc.	Cultural Resource Potential
014-1-pm-5.4g-69.8f	2474958.3	349098.4	14	1	Positive Monopolar	5.4g	69.8f	Small Single Object	None	Low
014-2-nm-15.1g-714.9f	2474988.5	348458.4	14	2	Negative Monopolar	15.1g	714.9f	Large Object(s)	None	Modern Debris/Rig Structure
015-1-nm-32.4g-540.9f	2474913.4	348464.1	15	1	Negative Monopolar	32.4g	540.9f	Large Object(s)	None	Modern Debris/Rig Structure
016-1-nm-60.9g-499.4f	2474867.6	348469.7	16	1	Negative Monopolar	60.9g	499.4f	Large Object(s)	None	Modern Debris/Rig Structure
017-1-nm-129.5g-472.3f	2474820.1	348470.5	17	1	Negative Monopolar	129.5g	472.3f	Large Object(s)	None	Modern Debris/Rig Structure
018-1-mc-536.8g-500.2f	2474772.2	348458.1	18	1	Multi-component	536.8g	500.2f	Large Object(s)	SB S3 SS 001 & 002	Modern Debris/Rig Structure
019-1-mc-3717.1g-314.5f	2474720.1	348407.2	19	1	Multi-component	3717.1g	314.5f	Large Object(s)	SB S3 SS 001 & 002	Modern Debris/Rig Structure
020-1-mc-7717.5g-304f	2474672.4	348443.5	20	1	Multi-component	7717.5g	304f	Large Object(s)	SB S3 SS 001 & 002	Modern Debris/Rig Structure
021-1-mc-1501.3g-474.1f	2474630.3	348486.2	21	1	Multi-component	1501.3g	474.1f	Large Object(s)	SB S3 SS 001 & 002	Modern Debris/Rig Structure
021-2-nm-110.1g-88.8f	2474617.2	348159.9	21	2	Negative Monopolar	110.1g	88.8f	Moderate Object(s)	None	Low Potential Cluster
022-1-nm-138.7g-366f	2474549.8	348423.8	22	1	Negative Monopolar	138.7g	366f	Large Object(s)	None	Modern Debris/Rig Structure
022-2-dp-61.4g-215.7f	2474539.8	348116.9	22	2	Dipolar	61.4g	215.7f	Moderate Object(s)	None	Low Potential Cluster
023-1-nm-50.1g-439f	2474493.4	348420.4	23	1	Negative Monopolar	50.1g	439f	Large Object(s)	None	Modern Debris/Rig Structure

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Assoc.	Cultural Resource Potential
023-2-dp-24.9g-104.8f	2474488.2	348102.2	23	2	Dipolar	24.9g	104.8f	Moderate Object(s)	None	Low Potential Cluster
024-1-nm-28.8g-504.9f	2474416.1	348428.4	24	1	Negative Monopolar	28.8g	504.9f	Large Object(s)	None	Modern Debris/Rig Structure
025-1-nm-19.7g-641.1f	2474386.4	348397.7	25	1	Negative Monopolar	19.7g	641.1f	Large Object(s)	None	Modern Debris/Rig Structure
026-1-nm-11.4g-607.7f	2474344.7	348405.9	26	1	Negative Monopolar	11.4g	607.7f	Large Object(s)	None	Modern Debris/Rig Structure
100-1-pm-149.6g-216.9f	2474484.9	348528.4	100	1	Positive Monopolar	149.6g	216.9f	Large Object(s)	None	Modern Debris/Rig Structure
100b-1-mc-631.8g-373.1f	2474893.5	348528.4	100b	1	Multi-component	631.8g	373.1f	Large Object(s)	None	Modern Debris/Rig Structure

## **APPENDIX M: SB S3 NE ACOUSTIC DATA**

**SB S3 NE Acoustic Data**

<b>Acoustic Target*</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Assoc.</b>	<b>Cultural Resource Potential</b>
SB S3 SS 001: 149	2474718.8	348467.8	Modern Debris/Rig Structure	018-1, 019-1, 020-1 and 021-1	Low
SB S3 SS 002: 150	2474657.6	348469.4	Modern Debris/Rig Structure	018-1, 019-1, 020-1 and 021-1	Low
SB S3 SB 001: 151	2474718.8	348467.8	Modern Debris/Rig Structure	018-1, 019-1, 020-1 and 021-1	Low
SB S3 SB 002	2474657.6	348469.4	Modern Debris/Rig Structure	018-1, 019-1, 020-1 and 021-1	Low

\*Page number of sidescan sonar contact sheet

## **APPENDIX N: SB S3 SW MAGNETOMETER DATA**

**SB S3 SW Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
034-1-pm-15.4g-218.1f	2473964.2	347658.5	34	1	Positive Monopolar	15.4g	218.1f	Large Object(s)	None	High Buffer A
035-1-pm-656.5g-80.6f	2473907.9	347670.7	35	1	Positive Monopolar	656.5g	80.6f	Large Object(s)	None	High Buffer A
036-1-nm-580.3g-138.7f	2473874.5	347661.8	36	1	Negative Monopolar	580.3g	138.7f	Large Object(s)	None	High Buffer A
037a-1-nm-446.2g-120.9f	2473789.3	347576	37a	1	Negative Monopolar	446.2g	120.9f	Large Object(s)	None	High Buffer A
037-1-nm-409.3g-97.7f	2473791.1	347574.4	37	1	Negative Monopolar	409.3g	97.7f	Large Object(s)	None	High Buffer A
038-1-dp-153.2g-201.8f	2473738.8	347467.8	38	1	Dipolar	153.2g	201.8f	Large Object(s)	None	High Buffer B
039-1-mc-189.5g-124.1f	2473691.3	347462.8	39	1	Multi-component	189.5g	124.1f	Large Object(s)	None	High Buffer B
040-1-mc-49-190.1f	2473665.9	347474.8	40	1	Multi-component	49	190.1f	Large Object(s)	None	High Buffer B
041-1-mc-245.4g-211.9f	2473615.8	347427.1	41	1	Multi-component	245.4g	211.9f	Large Object(s)	None	High Buffer B
042-1-dp-21g-240.4f	2473538.7	347353.9	42	1	Dipolar	21g	240.4f	Moderate Single Object	None	Moderate

## **APPENDIX O: SS P1 N MAGNETOMETER DATA**



### SS P1 N Magnetometer Data

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
001-1-pm-2.2g-62.1f	3416569.7	153627.3	1	1	Positive Monopolar	2.2g	62.1f	Small Ferrous Object(s)	None	Low
003-1-pm-14.2g-58.1f	3416441.9	155052.4	3	1	Positive Monopolar	14.2g	58.1f	Small Ferrous Object(s)	None	Low
003-2-dp-33.7g-95.1f	3416466.8	153614.9	3	2	Dipolar	33.7g	95.1f	Moderate Ferrous Object(s)	None	Low
004-1-dp-7.2g-140f	3416399.5	154815.8	4	1	Dipolar	7.2g	140f	Small Ferrous Object	None	Moderate Buffer B
004-2-nm-3.7g-48.1f	3416411.8	153998.8	4	2	Negative Monopolar	3.7g	48.1f	Small Ferrous Object(s)	None	Low
005A-1-dp-34.7g-129.7f	3416374.3	154816.1	005A	1	Dipolar	34.7g	129.7f	Moderate Ferrous Object	None	Moderate Buffer B
006-1-dp-13g-98.8f	3416333.8	154816	6	1	Dipolar	13g	98.8f	Small Ferrous Object	None	Moderate Buffer B
006-2-pm-9.5g-69.6f	3416298.1	153888	6	2	Positive Monopolar	9.5g	69.6f	Small Ferrous Object(s)	None	Low
007-1-dp-20.4g-124f	3416263.4	154538	7	1	Dipolar	20.4g	124f	Moderate Ferrous Object	None	low
008-1-dp-7.6g-154f	3416240.6	154577.8	8	1	Dipolar	7.6g	154f	Moderate Ferrous Object	None	Low
008-2-nm-1.7g-197.9f	3416238.5	154067.6	8	2	Negative Monopolar	1.7g	197.9f	Small Ferrous Object(s)	None	High Buffer A
009-1-pm-21.8g-103.8f	3416191.1	153994.4	9	1	Positive Monopolar	21.8g	103.8f	Small Ferrous Object(s)	None	High Buffer A
010-1-dp-29.5g-242.1f	3416144.9	154064.3	10	1	Dipolar	29.5g	242.1f	Moderate Ferrous Object	None	High Buffer A

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
011-1-pm-28.4g-73.5f	3416083.2	154188.5	11	1	Positive Monopolar	28.4g	73.5f	Small Ferrous Object(s)	None	High Buffer A
011-2-dp-205.1g-171.3f	3416087.8	154058.7	11	2	Dipolar	205.1g	171.3f	Moderate Ferrous Object	None	High Buffer A
011-3-dp-11.2g-55.4f	3416089.4	153883.9	11	3	Dipolar	11.2g	55.4f	Small Ferrous Object	None	Low
012-1-nm-3.3g-51.7f	3416040.5	154473.7	12	1	Negative Monopolar	3.3g	51.7f	Small Ferrous Object(s)	None	Low
012-2-dp-19.4g-365.8f	3416042.3	154053.8	12	2	Dipolar	19.4g	365.8f	Moderate Ferrous Object	None	High Buffer A
013-1-dp-7.5g-69f	3415977.3	153813	13	1	Dipolar	7.5g	69f	Small Ferrous Object	None	Low
013-2-nm-5.1g-61.2f	3415973.8	153423.1	13	2	Negative Monopolar	5.1g	61.2f	Small Ferrous Object(s)	None	Low
014-1-pm-16.7g-109.7f	3415940	154255.7	14	1	Positive Monopolar	16.7g	109.7f	Small Ferrous Object(s)	None	Low
014-2-dp-3.3g-31.2f	3415932.7	153286.1	14	2	Dipolar	3.3g	31.2f	Small Ferrous Object	None	Low
015-1-nm-2.1g-54.9f	3415867.9	154406.5	15	1	Negative Monopolar	2.1g	54.9f	Small Ferrous Object(s)	None	Low
016-1-pm-9.1g-47.8f	3415825.6	154108.8	16	1	Positive Monopolar	9.1g	47.8f	Small Ferrous Object(s)	None	Moderate Buffer C
016-2-nm-36.4g-47.6f	3415831.5	153772.8	16	2	Negative Monopolar	36.4g	47.6f	Small Ferrous Object(s)	None	Low
017-1-pm-29.5g-90.1f	3415794.3	154145.9	17	1	Positive Monopolar	29.5g	90.1f	Small Ferrous Object(s)	None	Moderate Buffer C

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
017-2-pm-34.6g-67.3f	3415794.6	153821	17	2	Positive Monopolar	34.6g	67.3f	Small Ferrous Object(s)	None	Low
018-1-dp-24g-112.8f	3415714.4	154140.8	18	1	Dipolar	24g	112.8f	Moderate Ferrous Object	None	Moderate Buffer C
018-2-pm-4.3g-55.3f	3415719.1	153995.4	18	2	Positive Monopolar	4.3g	55.3f	Small Ferrous Object(s)	None	Low
019-1-mc-15.3g-139f	3415705.5	154213.9	19	1	Multi-component	15.3g	139f	Moderate Ferrous Object(s)	None	Moderate Buffer C
019-2-nm-2.8g-121.2f	3415706.7	153307.4	19	3	Negative Monopolar	2.8g	121.2f	Small Ferrous Object(s)	Possible Assoc. SS 001 (Appendix Q)	Low
020-1-nm-7.9g-281.1f	3415640.7	153252.6	20	1	Negative Monopolar	7.9g	281.1f	Moderate Ferrous Object(s)	Possible Assoc. SS 001 (Appendix Q)	Low
021-1-dp-8.5g-92.7f	3415581.7	154854.3	21	1	Dipolar	8.5g	92.7f	Small Ferrous Object	None	Low
100-2-dp-7.1g-93.6f	3417007.8	154054.2	100	2	Dipolar	7.1g	93.6f	Small Ferrous Object	None	Low
100-1-nm-58.6g-169.6f	3416078.7	154078.7	100	2	Negative Monopolar	58.6g	169.6f	Moderate Ferrous Object(s)	None	High Buffer A
101-1-pm-2.6g-34.5f	3415754.2	154117	101	2	Positive Monopolar	2.6g	34.5f	Small Ferrous Object(s)	None	Moderate Buffer C
101-2-pm-5.7g-44.2f	3415820.5	154109.3	101	3	Positive Monopolar	5.7g	44.2f	Small Ferrous Object(s)	None	Moderate Buffer C
101-3-nm-12.6g-118.7f	3416114.9	154129.5	101	4	Negative Monopolar	12.6g	118.7f	Moderate Ferrous Object(s)	None	High Buffer A
102-1-pm-12.4g-58.5f	3415049.3	154002.6	102	1	Positive Monopolar	12.4g	58.5f	Small Ferrous Object(s)	None	Low

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
102-2-dp-15.1g-54.1f	3415750.9	154023.3	102	2	Dipolar	15.1g	54.1f	Small Ferrous Object	None	Low
102-3-pm-220.1g-120.1f	3416112.7	154023.5	102	3	Positive Monopolar	220.1g	120.1f	Moderate Ferrous Object(s)	None	High Buffer A
103-1-pm-9.3g-51.6f	3416775.1	154118.2	103	1	Positive Monopolar	9.3g	51.6f	Small Ferrous Object(s)	None	Low
103-2-nm-13.5g-207f	3416082.3	154107.1	103	2	Negative Monopolar	13.5g	207f	Moderate Ferrous Object(s)	None	High Buffer A

## **APPENDIX P: SS P1 S MAGNETOMETER DATA**

**SS P1 S Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
005-1-nm-3.3g-62.3f	3416396.1	153225.4	5	1	Negative Monopolar	3.3g	62.3f	Small Single Object(s)	None	Low
007-1-dp-29.3g-66.1f	3416289.1	151602.2	7	1	Dipolar	29.3g	66.1f	Small Single Object	None	Low
009-1-dp-32.9g-66.6f	3416159.2	152731.9	9	1	Dipolar	32.9g	66.6f	Small Single Object	None	Low
013-1-pm-4.1g-74.8f	3415999.7	153559.1	13	1	Positive Monopolar	4.1g	74.8f	Small Single Object(s)	None	Low
015-1-dp-22.9g-82.2f	3415900.1	153462.4	15	1	Dipolar	22.9g	82.2f	Small Single Object	None	Low
017-1-pm-12.7g-39.7f	3415794.2	153780.5	17	1	Positive Monopolar	12.7g	39.7f	Small Single Object(s)	None	Low
017-2-dp-219.5g-227.1f	3415777.3	152773	17	2	Dipolar	219.5g	227.1f	Large Single Object	None	Moderate Buffer A
017-3-pm-24.2g-31.5f	3415788.6	152405.9	17	3	Positive Monopolar	24.2g	31.5f	Small Single Object(s)	None	Low
019-1-mc-59.4g-90.9f	3415684.9	152151.3	19	1	Multi-component	59.4g	90.9f	Moderate Object(S)	None	Moderate Buffer B

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
021-1-nm- 11.2g- 51.9f	3415606.3	152206.7	21	1	Negative Monopolar	11.2g	51.9f	Small Single Object(s)	None	Moderate Buffer B
033-1-dp- 15.7g- 60.2f	3414996.9	153451.4	33	1	Dipolar	15.7g	60.2f	Small Single Object	None	Low

**APPENDIX Q: SS P1 S SIDESCAN SONAR DATA**



**SS P1 S Sidescan Sonar Data**

<b>Sonar Target</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SS 001	3415532.2	153724.6	Small Single Object	019-2, 020-1 (see Appendix O)	Low

## **APPENDIX R: SS P2 MAGNETOMETER DATA**

**SS P2 Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
011-1-nm-28g-98.6f	3509902.1	150017.3	11	1	Negative Monopolar	28g	98.6f	Small Ferrous Object(s)	None	Moderate
012-1-nm-10.3g-179.9f	3509865.8	150037.4	12	1	Negative Monopolar	10.3g	179.9f	Small Ferrous Object(s)	None	Moderate
012-2-nm-8.4g-157.1f	3509986.2	149681.5	12	2	Negative Monopolar	8.4g	157.1f	Moderate Ferrous Object(s)	None	Modern Debris
012-3-nm-6.4g-129.2f	3510073.3	149430.5	12	3	Negative Monopolar	6.4g	129.2f	Small Ferrous Object(s)	None	Low
013-1-nm-276.1g-91.5f	3509948.6	149652.2	13	1	Negative Monopolar	276.1g	91.5f	Large Ferrous Object(s)	None	Modern Debris
013-2-nm-9.6g-36.9f	3510061.8	149313.6	13	2	Negative Monopolar	9.6g	36.9f	Small Ferrous Object(s)	None	Low
014-1-dp-84.3g-241f	3509884.1	149659.9	14	1	Dipolar	84.3g	241f	Moderate Ferrous Object(s)	None	Modern Debris
014-2-pm-58.8g-103f	3510017.3	149307.9	14	2	Positive Monopolar	58.8g	103f	Moderate Ferrous Object(s)	None	Moderate
015-1-dp-12.8g-272.5f	3509849.3	149656.7	15	1	Dipolar	12.8g	272.5f	Moderate Ferrous Object(s)	None	Modern Debris

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
015-2-pm-4.3g-180.2f	3509974.9	149277.8	15	2	Positive Monopolar	4.3g	180.2f	Small Ferrous Object(s)	None	Moderate
016-1-dp-38.7g-101.5f	3509878.7	149343.7	16	1	Dipolar	38.7g	101.5f	Moderate Ferrous Object(s)	None	Moderate
017-1-dp-4.4g-140.2f	3509839.1	149361.8	17	1	Dipolar	4.4g	140.2f	Small Ferrous Object(s)	None	Low

## **APPENDIX S: SS P3 MAGNETOMETER DATA**

**SS P3 Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
008-1-mc-36.1g-147.3f	3515560.3	150618.9	8	1	Multi-component	36.1g	147.3f	Moderate Ferrous Object(s)	None	Moderate Potential Buffer E
009-1-pm-48.6g-105f	3513043.2	149253.5	9	1	Positive Monopolar	48.6g	105f	Moderate Ferrous Object(s)	None	Moderate Potential Buffer D
009-2-dp-29.7g-75.1f	3514463.3	150010.1	9	2	Dipolar	29.7g	75.1f	Small Ferrous Object(s)	None	Low
010-1-dp-13.5g-165f	3513115.2	149223.9	1	1	Positive Monopolar	13.5g	165	Moderate Ferrous Object(s)	None	Moderate Potential Buffer D
011-1-pm-10.4g-53.8f	3513172.1	149205.3	11	1	Positive Monopolar	10.4g	53.8f	Small Ferrous Object(s)	None	Moderate Potential Buffer D
013-1-dp-321.6g-198.9f	3514244.5	149622.4	13	1	Dipolar	321.6g	198.9f	Large Ferrous Object(s)	None	Moderate Potential Buffer B
013-2-dp-8.6g-67f	3514929.8	149990.7	13	2	Dipolar	8.6g	67f	Small Ferrous Object(s)	None	Low
014-1-dp-72.2g-197.2f	3514254.6	149577.8	14	1	Dipolar	72.2g	197.2f	Moderate Ferrous Object(s)	None	Moderate Potential Buffer B
014-2-nm-14.5g-57.1f	3515073.6	150020.1	14	2	Negative Monopolar	14.5g	57.1f	Small Ferrous Object(s)	None	Low

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
017-1-dp-37g-171.3f	3515330.4	150010.7	17	1	Dipolar	37g	171.3f	Moderate Ferrous Object(s)	None	High Potential Buffer A
018-1-dp-1529.6g-243.8f	3515338.3	149960.2	18	1	Dipolar	1529.6g	243.8f	Large Ferrous Object(s)	None	High Potential Buffer A
018-2-pm-8.9g-38.6f	3515912.6	150260.7	18	2	Positive Monopolar	8.9g	38.6f	Small Ferrous Object(s)	None	Low
019-1-dp-130.6g-270.4f	3515371.3	149918.8	19	1	Dipolar	130.6g	270.4f	Moderate Ferrous Object(s)	None	High Potential Buffer A
019-2-dp-19.5g-60.5f	3516185.3	150352.8	19	2	Dipolar	19.5g	60.5f	Small Ferrous Object(s)	None	Low
019-3-dp-16.9g-72.9f	3516500.9	150514.9	19	3	Dipolar	16.9g	72.9f	Small Ferrous Object(s)	None	Low
020-1-dp-19.9g-104.2f	3515396.7	149875.5	20	1	Dipolar	19.9g	104.2f	Small Ferrous Object(s)	None	High Potential Buffer A
022-1-dp-56.9g-105.3f	3515364.2	149739.9	22	1	Dipolar	56.9g	105.3f	Moderate Ferrous Object(s)	None	Moderate
024-1-dp-5.9g-38.2f	3516115.9	150020.6	24	1	Dipolar	5.9g	38.2f	Small Ferrous Object(s)	None	Low
025-1-dp-9.2g-114.2f	3516093.3	149979.9	25	1	Dipolar	9.2g	114.2f	Small Ferrous Object(s)	None	Low

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
029-1-dp-7.5g-71.5f	3517021.3	150150.7	29	1	Dipolar	7.5g	71.5f	Small Ferrous Object(s)	None	Low
030-1-dp-19.4g-77.8f	3516005.7	149641.3	30	1	Dipolar	19.4g	77.8f	Small Ferrous Object(s)	None	Low
031-1-dp-11.8g-60.1f	3517021.3	150151.2	31	1	Dipolar	11.8g	60.1f	Small Ferrous Object(s)	None	Moderate
033-1-dp-4.2g-67.5f	3513916.8	148357.8	33	1	Dipolar	4.2g	67.5f	Small Ferrous Object(s)	None	High Potential Buffer C
034-1-nm-10.7g-106.7f	3513844.7	148254.2	34	1	Negative Monopolar	10.7g	106.7f	Small Ferrous Object(s)	None	High Potential Buffer C
036-1-mc-35.1g-321.6f	3513941.4	148209.8	36	1	Multi-component	35.1g	321.6f	Moderate Ferrous Object(s)	None	High Potential Buffer C
036-2-pm-3.6g-55.2f	3515408.5	148964.9	36	2	Positive Monopolar	3.6g	55.2f	Small Ferrous Object(s)	None	Low
036-3-pm-3g-98.6f	3516027.5	149312.5	36	3	Positive Monopolar	3g	98.6f	Small Ferrous Object(s)	None	Low
036-4-dp-7.6g-68.5f	3516921.1	149780.6	36	4	Dipolar	7.6g	68.5f	Small Ferrous Object(s)	None	Low
037-1-nm-31.9g-75.8f	3513996.8	148168.9	37	1	Negative Monopolar	31.9g	75.8f	Small Ferrous Object(s)	None	High Potential Buffer C



<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
037-2- pm-28.2g- 46.5f	3515313.2	148864.1	37	2	Positive Monopolar	28.2g	46.5f	Small Ferrous Object(s)	SS P3 001	Low
037-3-dp- 39.4g- 122.2f	3516073.9	149265.1	37	3	Dipolar	39.4g	122.2f	Moderate Ferrous Object(s)	None	Moderate
037-4-dp- 29.5g- 70.7f	3516733.7	149628.4	37	4	Dipolar	29.5g	70.7f	Small Ferrous Object(s)	None	Low
037-5- pm-8g- 51.2f	3517117.3	149830.1	37	5	Positive Monopolar	8g	51.2f	Small Ferrous Object(s)	None	Low

## **APPENDIX T: SS P3 SIDESCAN SONAR DATA**

**SS P3 Sidescan Sonar Data**

<b>Sonar Target*</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SS P3 001: 153	3515279.2	148844.6	Small Single Object	037-2	Low

\*Page number of sidescan sonar contact sheet

## **APPENDIX U: SS S1 MAGNETOMETER DATA**

**SS S1 Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
011-1-pm-27.8g-233.2f	3389555.7	154883.5	11	1	Positive Monopolar	27.8g	233.2f	Moderate Object(s)	None	Deteriorated Pipe, Cable or Chain
012-1-dp-42.2g-116.2f	3389507.7	154877.3	12	1	Dipolar	42.2g	116.2f	Moderate Object(s)	None	Deteriorated Pipe, Cable or Chain
013-1-dp-60.4g-173.7f	3389454.5	154830.5	13	1	Dipolar	60.4g	173.7f	Moderate Object(s)	None	Deteriorated Pipe, Cable or Chain
014-1-pm-21.4g-128.6f	3389419.4	154796.5	14	1	Positive Monopolar	21.4g	128.6f	Moderate Object(s)	None	Deteriorated Pipe, Cable or Chain
015-1-nm-15.3g-206.7f	3389381.9	154810.6	15	1	Negative Monopolar	15.3g	206.7f	Moderate Object(s)	None	Deteriorated Pipe, Cable or Chain
016-1-nm-16.9g-147.4f	3389331.7	154791.3	16	1	Negative Monopolar	16.9g	147.4f	Moderate Object(s)	None	Deteriorated Pipe, Cable or Chain
017-1-pm-10g-107.9f	3389288	154762.4	17	1	Positive Monopolar	10g	107.9f	Small Object(s)	None	Deteriorated Pipe, Cable or Chain
018-1-pm-6.5g-92.5f	3389238	154738.5	18	1	Positive Monopolar	6.5g	92.5f	Small Object(s)	None	Deteriorated Pipe, Cable or Chain
019-1-nm-7.3g-120.6f	3389197.2	154714.7	19	1	Negative Monopolar	7.3g	120.6f	Small Object(s)	None	Deteriorated Pipe, Cable or Chain
019-2-nm-4.1g-204.1f	3389138.5	153555.9	19	2	Negative Monopolar	4.1g	204.1f	Small Object(s)	None	Low

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
020-1-dp-19.1g-236.8f	3389131.8	155154.9	20	1	Dipolar	19.1g	236.8f	Moderate Object(s)	None	High Cluster A
020-2-pm-5.3g-76.5f	3389146.5	154685.3	20	2	Positive Monopolar	5.3g	76.5f	Small Object(s)	None	Deteriorated Pipe, Cable or Chain
021-1-dp-257.3g-144.9f	3389098.6	155154.2	21	1	Dipolar	257.3g	144.9f	Large Object(s)	None	High Cluster A
021-2-pm-23.3g-67.9f	3389086.6	154640.8	21	1	Positive Monopolar	23.3g	67.9f	Small Object(s)	None	Deteriorated Pipe, Cable or Chain
022-1-nm-17.9g-145.2f	3389034.1	155153.7	22	1	Negative Monopolar	17.9g	145.2f	Moderate Object(s)	None	High Cluster A
022-2-pm-15.7g-116.2f	3389041.6	154625.9	22	2	Positive Monopolar	15.7g	116.2f	Small Object(s)	None	Deteriorated Pipe, Cable or Chain
023-1-nm-3.8g-152f	3388998.3	155153.9	23	1	Negative Monopolar	3.8g	152f	Moderate Object(s)	None	High Cluster A
023-2-dp-19.5g-182.4f	3388996.3	154594.4	23	2	Dipolar	19.5g	182.4f	Moderate Object(s)	None	Deteriorated Pipe, Cable or Chain
024-1-dp-5.5g-90.9f	3388947.5	154573.6	24	1	Dipolar	5.5g	90.9f	Small Object(s)	None	Deteriorated Pipe, Cable or Chain
024-2-pm-5g-183.9f	3389017.9	153534.1	24	2	Positive Monopolar	5g	183.9f	Moderate Object(s)	None	Low
026-1-pm-4.7g-32.1f	3388828.4	154443.1	26	1	Positive Monopolar	4.7g	32.1f	Small Object(s)	None	Deteriorated Pipe, Cable or Chain
027-1-dp-21.5g-95.6f	3388795.6	156241.3	27	1	Dipolar	21.5g	95.6f	Small Object(s)	None	Low

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
027-2-pm-6.3g-60.5f	3388776.1	154415.9	27	2	Positive Monopolar	6.3g	60.5f	Small Object(s)	None	Deteriorated Pipe, Cable or Chain
028-1-nm-21g-117.2f	3388739.5	156114.1	28	1	Negative Monopolar	21g	117.2f	Moderate Object(s)	None	Moderate Buffer B
029-1-dp-49.9g-171.4f	3388680.1	156107.7	29	1	Dipolar	49.9g	171.4f	Moderate Object(s)	None	Moderate Buffer B
029-2-nm-10.1g-44.8f	3388669.2	154362.4	29	2	Negative Monopolar	10.1g	44.8f	Small Object(s)	None	Deteriorated Pipe, Cable or Chain
100-1-dp-31.2g-247.7f	3389059.1	154590.2	100	1	Dipolar	31.2g	247.7f	Moderate Object(s)	None	Deteriorated Pipe, Cable or Chain

## **APPENDIX V: SS S2 MAGNETOMETER DATA**



**SS S2 Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
010-1-dp-12.2g-87.9f	3405458.1	136578.2	10	1	Dipolar	12.2g	87.9f	Small Single Object	None	Low
011-1-dp-19g-142.7f	3405405.2	136577.4	11	1	Dipolar	19g	142.7f	Small Single Object	None	Low
012-1-nm-16.2g-510f	3405356.5	136815.1	12	1	Negative Monopolar	16.2g	510f	Vessel Remains	SS 001, 002, 003 & 005	<b>Modern Spud Barge &amp; Debris</b>
013-1-nm-33.6g-476.6f	3405306	136815.5	13	1	Negative Monopolar	33.6g	476.6f	Vessel Remains	SS 001, 002, 003 & 005	<b>Modern Spud Barge &amp; Debris</b>
014-1-nm-101.9g-367.9f	3405255.7	136815.6	14	1	Negative Monopolar	101.9g	367.9f	Vessel Remains	SS 001, 002, 003 & 005	<b>Modern Spud Barge &amp; Debris</b>
015-1-dp-343.1g-377.3f	3405217.5	136809.5	15	1	Dipolar	343.1g	377.3f	Vessel Remains	SS 001, 002, 003 & 005	<b>Modern Spud Barge &amp; Debris</b>
016-1-dp-4396.6g-253.2f	3405158.3	136808.3	16	1	Dipolar	4396.6g	253.2f	Vessel Remains	SS 001, 002, 003 & 005	<b>Modern Spud Barge &amp; Debris</b>
017-1-mc-5961.3g-243.5f	3405129.5	136828.9	17	1	Multi-component	5961.3g	243.5f	Vessel Remains	SS 001, 002, 003 & 005	<b>Modern Spud Barge &amp; Debris</b>
018A-1-DP-1290.5G-415.8F	3405082	136822.9	018A	1	Dipolar	1290.5G	415.8F	Vessel Remains	SS 001, 002, 003 & 005	<b>Modern Spud Barge &amp; Debris</b>

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
019A-1-dp-2674.2g-226.8f	3405025.6	136771.4	019A	1	Dipolar	2674.2g	226.8f	Vessel Remains	SS 001, 002, 003 & 005	Modern Spud Barge & Debris
020-1-nm-1922.7g-236.6f	3404976.1	136763.1	20	1	Negative Monopolar	1922.7g	236.6f	Vessel Remains	SS 001, 002, 003 & 005	Modern Spud Barge & Debris
021-1-nm-752.9g-375f	3404926	136755.1	21	1	Negative Monopolar	752.9g	375f	Vessel Remains	SS 001, 002, 003 & 005	Modern Spud Barge & Debris
022-1-dp-145.4g-517.3f	3404888.4	136731.9	22	1	Dipolar	145.4g	517.3f	Vessel Remains	SS 001, 002, 003 & 005	Modern Spud Barge & Debris
023-1-dp-4.3g-60.4f	3404830.6	137546.4	23	1	Dipolar	4.3g	60.4f	Small Single Object	None	Low
023-2-dp-2.3g-53.1f	3404832.1	136986.9	23	2	Dipolar	2.3g	53.1f	Small Single Object	None	Low
023-3-nm-43.7g-534.5f	3404842	136697.8	23	3	Negative Monopolar	43.7g	534.5f	Vessel Remains	SS 001, 002, 003 & 005	Modern Spud Barge & Debris
024-1-nm-17.6g-513.8f	3404787.3	136700.5	24	1	Negative Monopolar	17.6g	513.8f	Vessel Remains	SS 001, 002, 003 & 005	Modern Spud Barge & Debris
025-1-nm-9.4g-496.5f	3404736.1	136657.1	25	1	Negative Monopolar	9.4g	496.5f	Vessel Remains	SS 001, 002, 003 & 005	Modern Spud Barge & Debris

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
026-1-dp-3g-108.4f	3404679.4	137048.3	26	1	Dipolar	3g	108.4f	Small Single Object	None	Low
028-1-nm-6.7g-141.2f	3404572.3	136936.3	28	1	Negative Monopolar	6.7g	141,2f	Moderate Single Object	None	Moderate Buffer A
029-1-mc-17.4g-108.4f	3404518.3	136953.9	29	1	Multi-component	17.4g	108.4f	Moderate Single Object(s)	None	Moderate Buffer A
030-1-nm-40.5g-94.3f	3404467.6	137070.3	30	1	Negative Monopolar	40.5g	94.3f	Moderate Single Object	None	Moderate Buffer B
030-2-dp-10.9g-85.7f	3404471.2	136963.7	30	2	Dipolar	10.9g	85.7f	Small Single Object	None	Moderate Buffer A
031-1-pm-52.9g-80.6f	3404436.6	137074.5	31	1	Positive Monopolar	52.9g	80.6f	Moderate Single Object	None	Moderate Buffer B
032-1-pm-13.2g-64.3f	3404371.7	137346.5	32	1	Positive Monopolar	13.2g	64.3f	Small Single Object	None	Low
033-1-dp-14.7g-61f	3404341.2	137037.7	33	1	Dipolar	14.7g	61f	Small Single Object	None	Low
038-1-dp-1.8g-78.3f	3404099.6	137135.8	38	1	Dipolar	1.8g	78.3f	Small Single Object	None	Low
100-1-mc-3172.2g-268.7f	3405127.8	136793.5	100	1	Multicomponent	3172.2g	268.7f	Vessel Remains	SS 001, 002, 003 & 005	Modern Spud Barge & Debris

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
101-1-mc- 4861.1g- 341.4f	3404967.5	136715.3	101	1	Multicomponent	4861.1g	341.4f	Vessel Remains	SS 001, 002, 003 & 005	<b>Modern Spud Barge &amp; Debris</b>
102-1-mc- 2175.2g- 314.6f	3405138.2	136832	102	1	Multicomponent	2175.2g	314.6f	Vessel Remains	SS 001, 002, 003 & 005	<b>Modern Spud Barge &amp; Debris</b>
103-1-mc- 3008.3g- 344.8f	3405074.5	136761.4	103	1	Multicomponent	3008.3g	344.8f	Vessel Remains	SS 001, 002, 003 & 005	<b>Modern Spud Barge &amp; Debris</b>

## **APPENDIX W: SS S2 SIDESCAN SONAR DATA**

**SS S2 Sidescan Sonar Data**

<b>Sonar Target*</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SS 001: 154	3405125.4	136777.7	Modern Barge Remains	100-1	Low
SS 002: 155	3405107.5	136754.9	Modern Barge Remains	100-1	Low
SS 003: 156	3405123.3	136835.1	Modern Barge Remains	017-1 and 102-1	Low
SS 004: 157	3404490.2	137438.3	Small Single Object	No	Low
SS 005: 158	3404965.1	136746.3	Modern Barge Remains	020-1	Low

\*Page number of sidescan sonar contact sheet

## **APPENDIX X: SS S3 MAGNETOMETER DATA**

**SS S3 Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
013-1-nm-16.4g-539.6f	3497220.6	153985.7	13	1	Negative Monopolar	16.4g	539.6f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
014-1-nm-35.8g-493.8f	3497155.1	153986.3	14	1	Negative Monopolar	35.8g	493.8f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
015-1-nm-58g-358.7f	3497120.8	153988.9	15	1	Negative Monopolar	58g	358.7f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
015-2-dp-7.6g-43.9f	3497129.9	153812.7	15	2	Dipolar	7.6g	43.9f	Small Single object	None	Low
016-1-nm-168.3g-406.3f	3497072.4	153978.2	16	1	Negative Monopolar	168.3g	406.3f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
017-1-dp-583.2g-394.6f	3497034.4	153938.7	17	1	Dipolar	583.2g	394.6f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
020-1-nm-1183.3g-156.6f	3496887.7	154024.2	20	1	Negative Monopolar	1183.3g	156.6f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
020-2-dp-161.1g-48.3f	3496868.8	153461.1	20	2	Dipolar	161.1g	48.3f	Moderate Single Object	SS 001, 002, 003 & 004	Low
021-1-dp-24.9g-60.5f	3496807.2	154178.4	21	1	Dipolar	24.9g	60.5f	Small Single object	None	Low



Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
021-2-nm-156.7g-313.4f	3496812.2	154020.1	21	2	Negative Monopolar	156.7g	313.4f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
022-1-mc-47.1g-399.2f	3496770.3	154024.8	22	1	Multi-component	47.1g	399.2f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
023-1-nm-21.2g-604.2f	3496705.3	153973.4	23	1	Negative Monopolar	21.2g	604.2f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
024-1-pm-13.4g-33.1f	3496674.5	154436.3	24	1	Positive Monopolar	13.4g	33.1f	Small Single object	None	Low
024-2-dp-12.8g-40.9f	3496689.4	154251.6	24	2	Dipolar	12.8g	40.9f	Small Single object	None	Low
024-3-nm-14.3g-48.3f	3496669.8	153642.8	24	3	Negative Monopolar	14.3g	48.3f	Small Single object	None	Low
024-4-dp-34.2g-119.8f	3496668.6	153476.3	24	4	Dipolar	34.2g	119.8f	Moderate Single Object	None	Low
025-1-pm-14.9g-62.7f	3496610.5	154029.5	25	1	Positive Monopolar	14.9g	62.7f	Small Single object	None	Low
025-2-nm-16g-86.9f	3496606.5	153489.2	25	2	Negative Monopolar	16g	86.9f	Small Single object	None	Low
100-1-pm-206.6g-376.8f	3496939.8	153820.4	100	1	Positive Monopolar	206.6g	376.8f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
100-2-nm- 18.5g-47.1f	3497578.8	153807.7	100	2	Negative Monopolar	18.5g	47.1f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
101-1-pm- 17.6g-217.6f	3496960	154148	101	1	Positive Monopolar	17.6g	217.6f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
103-1-dp- 8440.8g- 167.3f	3496962.9	153947.3	103	1	Dipolar	8440.8g	167.3f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge
105-1-pm- 15.8g-216.6f	3496921.1	154124.2	105	1	Positive Monopolar	15.8g	216.6f	Vessel Remains	SS 001, 002, 003 & 004	Modern Barge

## **APPENDIX Y: SS S3 ACOUSTIC DATA**

**SS S3 Acoustic Data**

<b>Acoustic Target*</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SS S3 SS 001: 159	3496926.3	153984.5	Modern Barge	020-1 and 103-1	Low
SS S3 SS 002: 160	2496962.8	153911.8	Modern Barge	020-1 and 103-1	Low
SS S3 SS 003: 161	3496928.7	154036.7	Conical Object Possibly Buoy	020-1 and 103-1	Low
SS S3 SS 004: 162	3496966.4	153928.9	Modern Barge	020-1 and 103-1	Low
SS S3 SB 001	3496926.3	153984.5	Subbottom Target	020-1 and 103-1	Low

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## **APPENDIX Z: SS S4 MAGNETOMETER DATA**

## SS S4 Magnetometer Data

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
006-1-dp-12.3g-109.4f	3517977	154159.9	6	1	Dipolar	12.3g	109.4f	Small Ferrous Object	None	Low
006-2-pm-4.3g-60f	3517974.2	154011.5	6	2	Positive Monopolar	4.3g	60f	Small Ferrous Object	None	Low
009-1-dp-91.1g-165.7f	3517805.6	153438	9	1	Dipolar	91.1g	165.7f	Moderate Ferrous Object	None	High Buffer B
010-1-mc-429.5g-201.9f	3517769.5	153419.3	10	1	Multi-component	429.5g	201.9f	Complex Ferrous Object(s)	None	High Buffer B
011-1-dp-254.9g-216.7f	3517729.4	153398.7	11	1	Dipolar	254.9g	216.7f	Large Ferrous Object	SS 003	High Buffer B
012-1-mc-5.6g-133.8f	3517687.4	154105.7	12	1	Multi-component	5.6g	133.8f	Complex Ferrous Object(s)	None	Low
012-2-dp-13.5g-275.6	3517688	153481.8	12	2	Dipolar	13.5g	275.6	Moderate Ferrous Object	SS 004	High Buffer B
012-3-nm-13.5g-251f	3517679.6	153410.3	12	2	Negative Monopolar	13.5g	251f	Moderate Ferrous Object	SS 003	High Buffer B
013-1-pm-5g-146.2f	3517635.7	154530.3	13	1	Positive Monopolar	5g	146.2f	Moderate Ferrous Object	None	Chain, Chain, Pipeline or Cable

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
013-2-nm-2.1g-69f	3517632.9	154120.6	13	2	Negative Monopolar	2.1g	69f	Small Ferrous Object	None	Low
013-3-nm-3.3g-213.2f	3517635.5	153417.6	13	3	Negative Monopolar	3.3g	213.2f	Moderate Ferrous Object	None	High Buffer B
014-1-pm-12.3g-173.2f	3517577.7	154514.4	14	1	Positive Monopolar	12.3g	173.2f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
014-2-nm-4.2g-75.2f	3517572.8	153938.7	14	2	Negative Monopolar	4.2g	75.2f	Small Ferrous Object	None	Chain, Pipeline or Cable
014-2-nm-4.4g-83,4f	3517572.8	153940.5	14	2	Negative Monopolar	4.4g	83,4f	Small Ferrous Object	None	Low
015-1-dp-13.7g-138.1f	3517540.2	154444.6	15	1	Dipolar	13.7g	138.1f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
016-1-mc-57.7g-93f	3517459.9	154224.7	16	1	Multi-component	57.7g	93f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
017A-1-nm-108.2g-117.4f	3517407.2	154137.6	017A	1	Negative Monopolar	108.2g	117.4f	moderate Ferrous Object	None	Chain, Pipeline or Cable
018-1-dp-16.4g-40.3f	3517353.5	154517.5	18	1	Dipolar	16.4g	40.3f	Small Ferrous Object	None	Low



Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
018-2-mc-51.7g-133.3f	3517379.1	154085.1	18	2	Multi-component	51.7g	133.3f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
018-3-dp-11.8g-38.4f	3517375.4	153839.2	18	3	Dipolar	11.8g	38.4f	Small Ferrous Object	None	Low
019-1-dp-123.2g-82.5g	3517306.1	153982.6	19	1	Dipolar	123.2g	82.5g	Moderate Ferrous Object	None	Chain, Pipeline or Cable
020-1-nm-22g-39.9f	3517274.1	153928.4	20	1	Negative Monopolar	22g	39.9f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
021-1-nm-12.4g-224.5f	3517236.7	154126.5	21	1	Negative Monopolar	12.4g	224.5f	Moderate Ferrous Object	None	High Buffer A
021-2-pm-16.9g-86.6f	3517246.7	153922.8	21	2	Positive Monopolar	16.9g	86.6f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
022-1-dp-43.4g-108.1f	3517178.3	154341.9	22	1	Dipolar	43.4g	108.1f	Moderate Ferrous Object	None	Moderate
022-2-mc-152g-228.3f	3517192.7	154116.1	22	2	Multi-component	152g	228.3f	Large Ferrous Object	SS 001 SS002	High Buffer A
022-3-mc-24.9g-135.9f	3517194.5	153854.8	22	3	Multi-component	24.9g	135.9f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
023-1-dp-127.4g-152.4f	3517144.3	154346.7	23	1	Dipolar	127.4g	152.4f	Moderate Ferrous Object	None	Moderate

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
023-2-dp-88.8g-243f	3517137.5	154086.2	23	2	Dipolar	88.8g	243f	Large Ferrous Object	SS002	High Buffer A
023-3-pm-8.6g-60.4f	3517137.4	153792.5	23	3	Positive Monopolar	8.6g	60.4f	Small Ferrous Object	None	Chain, Pipeline or Cable
024-2-pm-3.9g-38.1f	3517093.1	153738.2	24	2	Positive Monopolar	3.9g	38.1f	Small Ferrous Object	None	Chain, Pipeline or Cable
025-1-dp-182.8g-155.7f	3517049.2	154179.2	25	1	Dipolar	182.8g	155.7f	Large Ferrous Object	SS 001	High Buffer A
026-1-pm-1.7g-54.7f	3516989.6	154681.1	26	1	Positive Monopolar	1.7g	54.7f	Small Ferrous Object	None	Low
026-2-nm-4.1g-139.1f	3516985.6	154094.8	26	2	Negative Monopolar	4.1g	139.1f	Small Ferrous Object	SS 001	High Buffer A
026-3-nm-3.1g-37.6f	3516985.6	154095.7	26	3	Negative Monopolar	3.1g	37.6f	Small Ferrous Object	None	Low
026-4-pm-23.3g-121.4f	3516996.5	153647.7	26	4	Positive Monopolar	23.3g	121.4f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
026-5-pm-4.8g-62.9f	3516955	152970.4	26	5	Positive Monopolar	4.8g	62.9f	Small Ferrous Object	None	Low
026a-1-pm-4.4g-56.1f	3516998.6	154678.4	026a	1	Positive Monopolar	4.4g	56.1f	Small Ferrous Object	None	Low

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
026a-2-nm-4.4g-134.7f	3516994.9	154195.9	026a	2	Negative Monopolar	4.4g	134.7f	Small Ferrous Object	None	High Buffer A
026a-3-pm-36.6g-85.5f	3516984.8	153646.2	026a	3	Positive Monopolar	36.6g	85.5f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
026a-4-dp-54.1g-86.6f	3516983.3	152969.7	026a	4	Dipolar	54.1g	86.6f	Moderate Ferrous Object	None	Low
027-1-pm-29.9g-82.4f	3516921.3	153554.4	27	1	Positive Monopolar	29.9g	82.4f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
027-2-pm-32.5g-86.2f	3516937.6	153323.4	27	2	Positive Monopolar	32.5g	86.2f	Moderate Ferrous Object	None	low
028-1-dp-26.2g-75.9f	3516875.8	153554.6	28	1	Dipolar	26.2g	75.9f	Moderate Ferrous Object	None	Chain, Pipeline or Cable
028-2-dp35.1g-147.7f	3516871.8	153319.6	28	2	Dipolar	35.1g	147.7f	Moderate Ferrous Object	None	Low
029-1-nm-33.7g-50.6f	3516813.5	154996.7	29	1	Negative Monopolar	33.7g	50.6f	Small Ferrous Object	None	Low
029-2-dp-18.7g-47f	3516826.7	154207.8	29	2	Dipolar	18.7g	47f	Small Ferrous Object	None	Low
029-3-nm-38.3g-37.5f	3516829.4	153570.5	29	3	Negative Monopolar	38.3g	37.5f	Small Ferrous Object	None	Chain, Pipeline or Cable

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
030-1-dp- 18.6g- 58.5f	3516773.4	153607.7	30	1	Dipolar	18.6g	58.5f	Small Ferrous Object	None	Chain, Pipeline or Cable
100-1-pm- 1110.1g- 79.8f	3517165.8	154067.8	100	1	Positive Monopolar	1110.1g	79.8f	Large Ferrous Object	SS 002	High Buffer A
100-2-pm- 12.7g- 54.3f	3517326.8	154087.9	100	2	Positive Monopolar	12.7g	54.3f	Small Ferrous Object	None	Low

## **APPENDIX AA: SS S4 SIDESCAN SONAR DATA**

**SS S4 Sidescan Sonar Data**

<b>Sonar Target*</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SS S4 SS 001: 164	3517052.65	154147.86	Square Object in Depression	022-2, 025-1 and 026-2	High Buffer A
SS S4 SS 002: 165	3517141.84	154044.92	Square Object in Depression	022-2, 023-2 and 100-1	High Buffer A
SS S4 SS 003: 166	3517701.7	153381.17	Rectangular Object	011-1 and 012-3	High Buffer B
SS S4 SS 004: 167	3517733.12	153473.59	Rectangular Object	012-2	High Buffer B

\*Page number for sidescan sonar contact sheet

## **APPENDIX BB: SS S5 MAGNETOMETER DATA**

**SS S5 Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
002-1-pm- 3.4g-51.2f	3523196.4	154649.8	2	1	Positive Monopolar	3.4g	51.2f	Small Single Object	No	Low
002-2-dp- 77g-186.9f	3523203.6	151520.3	2	2	Dipolar	77g	186.9f	Moderate	No	Moderate
004-1-nm- 9.3g-63.1f	3522574.7	151256.6	4	1	Negative Monopolar	9.3g	63.1f	Small Single Object	No	Low
006-1-dp- 3.1g-104f	3521987.1	152916	6	1	Dipolar	3.1g	104f	Small Single Object	No	Low
008-1-pm- 7.5g-99.9f	3521378.2	153270	8	1	Positive Mono[polar	7.5g	99.9f	Small Single Object	No	Low
011-1-dp- 11g-61.8f	3520165.3	152875.7	11	1	Dipolar	11g	61.8f	Small Single Object	No	Low



## APPENDIX CC: HP S1 MAGNETOMETER DATA

## HP S1 Magnetometer Data

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
001-1-pm-3.9g-47.2f	4068921.2	570047.7	1	1	Positive Monopolar	3.9g	47.2f	Small Object	No	Low
001-2-dp-14.1g-98.4f	4068931.7	569559.3	1	2	Dipolar	14.1g	98.4f	Small Object	No	Low
005-1-dp-3.8g-174.8f	4068735.4	569512.6	5	1	Dipolar	3.8g	174.8f	Moderate Object	No	Low
007-1-nm-2.5g-132.6f	4068636.7	569513.4	7	1	Negative Monopolar	2.5g	132.6f	Moderate Object	No	Low
007-2-dp-14.9g-107.7f	4068634.6	569267.4	7	2	Dipolar	14.9g	107.7f	Small Object	No	Low
009-1-pm-41.3g-93f	4068532.7	569365.6	9	1	Positive Monopolar	41.3g	93f	Small Object	No	Low
010-1-pm-18.9g-74.3f	4068482.5	569254.3	10	1	Positive Monopolar	18.9g	74.3f	Small Object(s)	No	Moderate
011-1-pm-31.2g-64.3f	4068460.3	569266.7	11	1	Positive Monopolar	31.2g	64.3f	Small Object(S)	No	Moderate
015-1-pm-7.2g-83f	4068221.9	569776.3	15	1	Positive Monopolar	7.2g	83f	Small Object	No	Low
017-1-dp-6.5g-46.7f	4068124	569551.3	17	1	Dipolar	6.5g	46.7f	Small Object	No	High Buffer A
019-1-nm-10.2g-604.5f	4068046.5	569633.1	19	1	Negative Monopolar	10.2g	604.5f	Moderate Object(s)	No	High Buffer A
019-2-dp-5.8g-66.8f	4068050.4	568978.5	19	2	Dipolar	5.8g	66.8f	Small Object	No	Low
019-3-nm-12.1g-41.8f	4068053	568797.7	19	3	Negative Monopolar	12.1g	41.8f	Small Object	No	Low

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
020-1-dp-45.1g-491.6f	4067995.6	569563.3	20	1	Dipolar	45.1g	491.6f	Moderate Object(s)	No	High Buffer A
021-1-dp340.7g-335.4f	4067949.3	569556.3	21	1	Dipolar	340.7g	335.4f	Large Object(s)	No	High Buffer A
021-2-pm-7g-62.5f	4067943.8	569112.4	21	2	Positive Monopolar	7g	62.5f	Small Object	No	Moderate
022-1-dp-1362.9g-260.4f	4067908.9	569574.7	22	1	Dipolar	1362.9g	260.4f	Large Object(s)	No	High Buffer A
022-2-nm-79.7g-46.4f	4067895.9	569130.5	22	2	Negative Monopolar	79.7g	46.4f	Moderate Object(s)	No	Moderate
023-1-dp-1019g-299.7f	4067832.4	569651.3	23	1	Dipolar	1019g	299.7f	Large Object(s)	No	High Buffer A
024-1-dp-2282.9g-186.8f	4067788.8	569716.8	24	1	Dipolar	2282.9g	186.8f	Large Object(s)	No	High Buffer A
025-1-mc-1704.7g-257.1f	4067737.8	569794.6	25	1	Multi-component	1704.7g	257.1f	Large Object(s)	No	High Buffer A
026-1-dp-1098.2g-142.2f	4067684	569865.9	26	1	Dipolar	1098.2g	142.2f	Large Object(s)	No	High Buffer A
027-1-dp-39.4g-308.2f	4067644.3	569882.7	27	1	Dipolar	39.4g	308.2f	Moderate Object(s)	No	High Buffer A
028-1-nm-6.2g-399.3f	4067573.8	569812.9	28	1	Negative Monopolar	6.2g	399.3f	Moderate Object(s)	No	High Buffer A

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
031-1-pm-14.8g-47.8f	4067444.4	569484.4	31	1	Positive Monopolar	14.8g	47.8f	Small Object(s)	No	High Buffer B
033-1-dp-3.1g-51.3f	4067345.6	569473.3	33	1	Dipolar	3.1g	51.3f	Small Object	No	High Buffer B
033-2-dp-3.6g-40.8f	4067339.4	569239.6	33	2	Dipolar	3.6g	40.8f	Small Object	No	High Buffer B
035-1-mc-17.3g-113.6f	4067251.7	569517.9	35	1	Multi-component	17.3g	113.6f	Small Object(s)	No	High Buffer B
035-2-mc-4.4g-106.6f	4067267.5	569214.5	35	2	Multi-component	4.4g	106.6f	Small Object(s)	No	High Buffer B
035-3-dp-31.5g-89.8f	4067254.3	568788.3	35	3	Dipolar	31.5g	89.8f	Moderate Object	No	Moderate
036-1-mc-152.2g-96.6f	4067176.6	569486.8	36	1	Multi-component	152.2g	96.6f	Moderate Object(s)	No	High Buffer B
036-2-pm-302.8g-42.4f	4067177.6	569395.5	36	2	Positive Monopolar	302.8g	42.4f	Moderate Object(s)	No	High Buffer B
036-3-pm-66.2g-34.4f	4067178	569329.9	36	3	Positive Monopolar	66.2g	34.4f	Moderate Object(s)	No	High Buffer B
037-1-dp-28.1g-375.2f	4067148.5	570298.8	37	1	Dipolar	28.1g	375.2f	Moderate Object	No	High Buffer C
037-2-dp-201.5g-65.3f	4067157.1	569570.2	37	2	Dipolar	201.5g	65.3f	Moderate Object(s)	No	High Buffer B
037-3-dp-39.8g-87.1f	4067158.4	569422.9	37	3	Dipolar	39.8g	87.1f	Moderate Object(s)	No	High Buffer B

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
037-4-dp-5.1g-24.4f	4067154.7	569315	37	4	Dipolar	5.1g	24.4f	Small Object	No	High Buffer B
038-1-dp-101.5g-270.4f	4067104.9	570307.7	38	1	Dipolar	101.5g	270.4f	Large Object(s)	No	High Buffer C
038-2-mc-386.5g-111.6f	4067101.8	569410.3	38	2	Multi-component	386.5g	111.6f	Large Object(s)	No	High Buffer B
038-3-dp-50.6g-48.8f	4067123.3	568771	38	3	Dipolar	50.6g	48.8f	Moderate Object	No	Moderate
039-1-dp-1864g-156.4f	4067068.3	570258.1	39	1	Dipolar	1864g	156.4f	Large Object(s)	No	High Buffer C
039-2-dp-13.7g-24.8f	4067026	569420.6	39	2	Dipolar	13.7g	24.8f	Small Object	No	High Buffer B
040-1-mc-566g-159.2f	4067005.8	570317.4	40	1	Multi-component	566g	159.2f	Large Object(s)	No	High Buffer C
040-2-dp-33.9g-27.8f	4067012.7	569464.1	40	2	Dipolar	33.9g	27.8f	Small Object	No	High Buffer B
041-1-nm-1257.1g-135.5f	4066928.9	570302.7	41	1	Negative Monopolar	1257.1g	135.5f	Large Object(s)	No	High Buffer C
041-2-dp-33.5g-55.3f	4066933.5	569806.2	41	2	Dipolar	33.5g	55.3f	Moderate Object	No	Low
043-1-dp-11.4g-457.7f	4066838.2	570316.7	43	1	Dipolar	11.4g	457.7f	Moderate Object	No	High Buffer C
043-2-dp-3.7g-55.9f	4066812	569194.1	43	2	Dipolar	3.7g	55.9f	Small Object	No	Low

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
100-1-mc- 123.3g- 321.8f	4067120.2	569403.5	100	1	Multi- component	123.3g	321.8f	Large Object(s)	No	High Buffer B
101-1-dp- 1271.7g- 185.3f	4067756.2	569873.5	101	1	Dipolar	1271.7g	185.3f	Large Object(s)	No	High Buffer A
102-1-pm- 3043.2g- 144.1f	4067091.9	570284.2	102	1	Positive Monopolar	3043.2g	144.1f	Large Object(s)	No	High Buffer C

## **APPENDIX DD: HP S1 SIDESCAN SONAR DATA**



**HP S1 Sidescan Sonar Data**

<b>Sonar Target*</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
HP S1 SS 001: 168	4067803.6	570217.6	Possible School of Fish	No	Low

\*Page number for sidescan sonar contact sheet

## **APPENDIX EE: HP S3 NS & EW MAGNETOMETER DATA**

**HP S3 NS Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
011-1-dp	4082698.4	570908.6	11	1	Dipolar	4.6g	99.4f	Small Single Object	Possible SSS 012 & SSS 013	High Buffer A
012-1-dp	4082749.5	571209.1	12	1	Dipolar	13.6g	119.3f	Small Single Object	None	Moderate
002-1-dp	4082228.2	571015.3	2	1	Dipolar	50.5g	150.8f	Large Object(s)	None	High Buffer B
001-1-nm	4082193.4	571018.9	1	1	Negative Monopolar	45.1g	74.5f	Large Object(s)	None	High Buffer B

**HP S3 EW Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
106-1-dp-16.8g-280.4f	4081981.2	571243.8	106	1	Dipolar	16.8g	280.4f	Moderate Object(s)	No	Moderate
106-2-nm-14.3g-109.4f	4082753.6	571237.3	106	2	Negative Monopolar	14.3g	109.4f	Small Object	No	Moderate
107-1-nm-207.7g-88.8f	4081706.4	571202.9	107	1	Negative Monopolar	207.7g	88.8f	Large Object	No	High Buffer C
107-2-pm-6.4g-63.3f	4081970.4	571194.4	107	2	Positive Monopolar	6.4g	63.3f	Small Object	No	Moderate
108-1-pm-14.9g-261.4f	4081724.7	571146.9	108	1	Positive Monopolar	14.9g	261.4f	Moderate Object(s)	No	High Buffer C
109-1-nm-86.6g-88.9f	4082223.8	571079.1	109	1	Negative Monopolar	86.6g	88.9f	Moderate Object(s)	No	High Buffer B
110-1-dp-8g-51.5f	4081657.4	571025.2	110	1	Dipolar	8g	51.5f	Small Object	No	Low
110-2-mc-9.5g-303.1f	4082148.1	571033.5	110	2	Multicomponent	9.5g	303.1f	Moderate Object(s)	No	High Buffer B
111-1-nm-6g-377.7f	4081907.4	570967.7	111	1	Negative Monopolar	6g	377.7f	Moderate Object(s)	No	Source Likely out of Area

## **APPENDIX FF: HP S3 NS & EW SIDESCAN SONAR DATA**

HP S3 NS & EW Sidescan Sonar Data

Sonar Target	X Coordinate	Y Coordinate	Assessment	Anomaly Association	Cultural Resource Potential
SSS 001	4082236.1	569495.4	Small Linear Object	No	Low
SSS 002	4082753.1	569082.4	Linear Object	No	Low
SSS 003	4082611.4	571366.9	Small Single Object	No	Low
SSS 004	4082624.8	571295.3	Small Single Object	No	Low
SSS 005	4082896.9	571532.3	Small Single Object	No	Low
SSS 006	4082688.9	571000.8	Possible Ballast Scatter	011-1	High Buffer A
SSS 007	4082910.1	567922.6	Small Linear Object	No	Low
SSS 008	4082998.9	571100.1	Small Linear Object	No	Low
SSS 009	4083962.2	568156.4	Long Linear Object	No	Low
SSS 010	4084182.3	569764.6	Rectangular Object	No	Moderate
SSS 011	4082061.2	571385.6	Possible Trap	No	Low
SSS 012	4082662.6	570964.3	Possible Ballast Scatter	011-1	High Buffer A
SSS 013	4082633.5	570896.8	Possible Ballast Scatter	011-1	High Buffer A

## **APPENDIX GG: HP S4B MAGNETOMETER DATA**

### HP S4B Magnetometer Data

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
002-1-nm-1.4g-25.1f	4054773.6	575601.1	2	1	Negative Monopolar	1.4g	25.1f	Small Object	None	Low
002-1-nm-4.1g-35.2f	4054851	575526	2	1	Negative Monopolar	4.1g	35.2f	Small Object	None	Low
002-3-dp-9.7g-33.4f	4055256.3	575132.9	2	3	Dipolar	9.7g	33.4f	Small Object	None	Low
002-4-dp-19g-45.2f	4055331.1	575054.8	2	4	Dipolar	19g	45.2f	Small Object	None	Low
004-1-dp-4.2g-22.9f	4054680.4	575536.4	4	1	Dipolar	4.2g	22.9f	Small Object	None	Low
004-2-nm-10.2g-202.3f	4054798.2	575426.1	4	2	Negative Monopolar	10.2g	202.3f	Moderate Object(s)	None	Buffer A Modern Trawler
004-3-dp-30g-57.1f	4055072.2	575178.3	4	3	Dipolar	30g	57.1f	Small Object	None	Moderate
004-4-dp-12.4g-35.2f	4055133.2	575121.8	4	4	Dipolar	12.4g	35.2f	Small Object	None	Low
006-1-nm-24.1g-39.4f	4054283.9	575832	6	1	Negative Monopolar	24.1g	39.4f	Small Object	None	Low
006-2-dp-6371g-95.7f	4054724.7	575372.9	6	2	Dipolar	6371g	95.7f	Large Object(s)	SSS 001	Buffer A Modern Trawler
006-3-dp-17.9g-14f	4055055.5	575011.3	6	3	Dipolar	17.9g	14f	Small Object	None	Low
008-1-dp-66.3g-34.4f	4054095.7	575891.9	8	1	Dipolar	66.3g	34.4f	Moderate Object	None	Moderate
008-2-mc-118.2g-281.3f	4054627.6	575305.5	8	2	Multi-component	118.2g	281.3f	Moderate Object(S)	None	Buffer A Modern Trawler



<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
008-3-nm- 4.9g-22.9f	4054812.5	575123.5	8	3	Negative Monopolar	4.9g	22.9f	Small Object	None	Low
008-4-pm- 3.6g-11.8f	4054890.3	575044	8	4	Positive Monopolar	3.6g	11.8f	Small Object	None	Low
010-1-mc- 9.6g-72.6f	4054462.3	575351	10	1	Multi- component	9.6g	72.6f	Small Object	None	Low
010-2-nm- 6.5g-173.8f	4054533	575280	10	2	Negative Monopolar	6.5g	173.8f	Moderate Object(S)	None	Moderate
010-3-dp- 26.3g-40.5f	4055050.1	574756.9	10	3	Dipolar	26.3g	40.5f	Small Object	None	Low

## **APPENDIX HH: HP S4B SIDESCAN SONAR DATA**

HP S4B Sidescan Sonar Data

<b>Sonar Target</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SS 001	4054708.2	575397.7	Modern Trawler Debris	006-2	Low

## APPENDIX II: HP S4A MAGNETOMETER DATA

**HP S4A Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
009-1-dp-14.5g-72.6f	4057479.3	571360.8	9	1	Dipolar	14.5g	72.6f	Small Object(s)	None	Moderate
009-2-dp-4.9g-47.3f	4056904	571857.3	9	2	Dipolar	4.9g	47.3f	Small Object	None	High Buffer A
009-3-dp-1.9g-21.8f	4056838.5	571910.9	9	3	Dipolar	1.9g	21.8f	Small Object	None	High Buffer A
009-4-dp-27.7g-53.4f	4056787.1	571957.6	9	4	Dipolar	27.7g	53.4f	Small Object	None	High Buffer A
009-5-dp-2.2g-34.8f	4056632.3	572075.9	9	5	Dipolar	2.2g	34.8f	Small Object	None	Low
009A-1-pm-45.7g-30.9f	4057502.9	571383.8	009A	1	Positive Monopolar	45.7g	30.9f	Small Object(s)	None	Moderate
009A-2-dp-206.4g-105.3f	4056771.4	571944.5	009A	2	Dipolar	206.4g	105.3f	Large Object	None	High Buffer A
011-1-pm-183.2g-91.4f	4057012.3	571884.7	11	1	Positive Monopolar	183.2g	91.4f	Large Object(s)	SS 002 and SB 001	High Buffer A
011-2-mc-21g-151.1f	4056922.2	571953.7	11	2	Multi-component	21g	151.1f	Moderate Object(s)	None	High Buffer A
013-1-dp-76.6g-30.9f	4057226.3	571800.3	13	1	Dipolar	76.6g	30.9f	Small Object(s)	None	Moderate
013-2-nm-121.6g-76.2f	4057094.3	571910.8	13	2	Negative Monopolar	121.6g	76.2f	Moderate Object(s)	None	High Buffer A

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
013-3-dp-14.3g-38.7f	4056978.8	572008.3	13	3	Dipolar	14.3g	38.7f	Small Object	011-2 and 013-3	High Buffer A
013-4-dp-44.9g-65.3f	4056894.9	572080.8	13	4	Dipolar	44.9g	65.3f	Moderate Object	None	High Buffer A
013-5-mc-157.1g-165.1f	4056824.2	572139.4	13	5	Multi-component	157.1g	165.1f	Moderate Object(s)	None	High Buffer A
013-6-pm-19.3g-108.4f	4056363.6	572552.4	13	6	Positive Monopolar	19.3g	108.4f	Small Object(s)	None	Moderate
015-1-nm-4.2g-20.2f	4057433.2	571766.5	15	1	Negative Monopolar	4.2g	20.2f	Small Object(s)	None	Low
015-2-dp-165.9g-104f	4057200	571958.2	15	2	Dipolar	165.9g	104f	Moderate Object(s)	None	High Buffer A
015-3-dp-24.8g-44.5f	4057141.9	572011.8	15	3	Dipolar	24.8g	44.5f	Small Object	None	High Buffer A
015-4-nm-2.7g-21.9f	4056974.4	572165.6	15	4	Negative Monopolar	2.7g	21.9f	Small Object(s)	None	High Buffer A
015-5-pm-172.8g-77.3f	4056878.8	572255.5	15	5	Positive Monopolar	172.8g	77.3f	Moderate Object(s)	None	High Buffer A

## **APPENDIX JJ: HP S4A SIDESCAN SONAR DATA**

**HP S4A Acoustic Data**

<b>Sonar Target*</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SS 002	4057023.9	571887.7	Bottom Surface Debris	011-1	High Buffer A
SS 003	4056989.5	571959.8	Bottom Surface Debris	011-2 and 013-3	High Buffer A
SB 001: 173	4057023.9	571887.7	No Additional Insight	011-1	High Buffer A

\*Page number for sidescan sonar contact sheet



## **APPENDIX KK: SBS P1 AND P2 MAGNETOMETER DATA**

**SBS P1 and P2 Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
006-1-dp-19.9g-197f	4133765.1	422617.1	6	1	Dipolar	19.9g	197f	Moderate Object	No	High Buffer B
007-1-dp-44g-283.7f	4133729.9	422641.6	7	1	Dipolar	44g	283.7f	Moderate Object	No	High Buffer B
008-1-dp-18.4g-268.9f	4133685.6	422632.3	8	1	Dipolar	18.4g	268.9f	Moderate Object	No	High Buffer B
008-2-nm-7g-177.9f	4133671.5	424942.4	8	2	Negative Monopolar	7g	177.9f	Small Object(s)	No	High Buffer A
009-1-nm-24.2g-234.2f	4133634.6	424935.1	9	1	Negative Monopolar	24.2g	234.2f	Moderate Object(s)	No	High Buffer A
010-1-mc-76.5g-613.8f	4133581.9	424941.1	10	1	Multi-component	76.5g	613.8f	Large Object(s)	No	High Buffer A
010-2-dp-6.7g-280.3f	4133578.3	423242.7	10	2	Dipolar	6.7g	280.3f	Moderate Object	No	Low
011-1-mc-391g-408.6f	4133544.1	424935.5	11	1	Multi-component	391g	408.6f	Large Object(s)	No	High Buffer A
012-1-mc-51.5g-741.8f	4133474.6	425103.2	12	1	Multi-component	51.5g	741.8f	Moderate Object	No	High Buffer A
013-1-dp-94.8g-302.7f	4133398.6	425251.1	13	1	Dipolar	94.8g	302.7f	Large Object	No	High Buffer A
014-1-dp-23g-262.7f	4133365.4	425240.6	14	1	Dipolar	23g	262.7f	Moderate Object	No	High Buffer A

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
021-1-dp- 10.6g- 184.5f	4133033.7	425844	21	1	Dipolar	10.6g	184.5f	Moderate Object	No	Low
101-1-pm- 43g-141.7f	4133454.8	425301.1	101	1	Positive Monopolar	43g	141.7f	Moderate Object	No	High Buffer A

## **APPENDIX LL: SBS P1 AND P2 SIDESCAN SONAR DATA**

**SBS P1 and P2 Acoustic Data**

<b>Sonar Target*</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SS 001: 175	4133511.6	425947.5	Single Object in Depression	No	Low
SB 001	4133511.6	425947.5	Single Object in Depression	No	Low

\*Page number for sidescan sonar contact sheet

## **APPENDIX MM: CHANDELEUR MAGNETOMETER DATA**

Chandeleur Primary Survey Area Magnetometer Data

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
001-1-pm-2.7g-71.8f	4076392.2	549906.8	1	1	Positive Monopolar	2.7g	71.8f	Small Object	None	Low
002-1-dp-32g-227.2f	4076655.2	549284.2	2	1	Dipolar	32g	227.2f	Small Object	None	Low
010-1-nm-27.7g-143.7f	4077809.6	550312.6	10	1	Negative Monopolar	27.7g	143.7f	Moderate Object(s)	None	Moderate
015-1-nm-3g-73.5f	4078560.7	550650.9	15	1	Negative Monopolar	3g	73.5f	Small Object	None	Low
016-1-dp-39.9g-216.2f	4078216	552599.5	16	1	Dipolar	39.9g	216.2f	Moderate Object(s)	None	Moderate
017-1-nm-3.1g-229.7f	4078474.8	552429.5	17	1	Negative Monopolar	3.1g	229.7f	Moderate Object(s)	None	<b>Ballast Pile</b>
018-1-nm-10.9g-139.4f	4078671.2	552206.5	18	1	Negative Monopolar	10.9g	139.4f	Moderate Object(s)	None	Moderate

**Chandeleur Primary Area Offsets Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
006-1- pm-2.4g- 149.8f	4077880.8	550301.2	6	1	Positive Monopolar	2.4g	149.8f	Small Object(s)	None	Low
007-1- nm- 13.6g- 120.9f	4077790.7	550249.7	7	1	Negative Monopolar	13.6g	120.9f	Small Object(s)	None	Low

**Chandeleur Secondary Survey Area South Magnetometer Data**

<b>Anomaly</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Line #</b>	<b>Anomaly #</b>	<b>Signature</b>	<b>Gammas</b>	<b>Duration</b>	<b>Analysis</b>	<b>Sonar Association</b>	<b>Cultural Resource Potential</b>
008-1- dp-4.4g- 77.7f	4077705.7	550347.7	8	1	Dipolar	4.4g	77.7f	Small Object	None	Moderate
010-1- nm- 16.7g- 159.1f	4077796.7	550413.6	10	1	Negative Monopolar	16.7g	159.1f	Moderate Object(s)	None	Moderate
011-1- pm- 12.7g- 123.2f	4077840.7	550145.6	11	1	Positive Monopolar	12.7g	123.2f	Small Object(s)	None	Moderate
024-1- dp-2.4g- 77.8f	4078484.7	551314.6	24	1	Dipolar	2.4g	77.8f	Small Object	None	Low



Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
025-1-dp-7g-139.7f	4078533.2	550538.4	25	1	Dipolar	7g	139.7f	Small Object		Low

**Chandeleur Secondary Survey Area North Magnetometer Data**

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
04-1-nm-1.1g-152.7f	4078145.4	552565.2	4	1	Negative Monopolar	1.1g	152.7f	Moderate Object(S)	None	High
05-1-nm-27.8g-120f	4078237.2	552586	5	1	Negative Monopolar	27.8g	120f	Moderate Object(S)	None	High
06-1-dp-16.8g-191.8f	4078233.3	552570.3	6	1	Dipolar	16.8g	191.8f	Moderate Object(S)	None	Ballast Pile
08-1-mc-5.7g-193f	4078391.8	552420.4	8	1	Multi-component	5.7g	193f	Moderate Object(S)	None	Ballast Pile
09-1-dp-23.7g-260f	4078422.2	552420.9	9	1	Dipolar	23.7g	260f	Moderate Object(S)	None	Ballast Pile
14-1-nm-8.7g-168.2f	4078675	552176.7	14	1	Negative Monopolar	8.7g	168.2f	Moderate Object(S)	None	High
15-1-mc-11.8g-172.4f	4078714.3	552179.8	15	1	Multi-component	11.8g	172.4f	Moderate Object(S)	None	High

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
16-1-dp- 5.6g- 207.2f	4078759.4	552197.4	16	1	Dipolar	5.6g	207.2f	Moderate Object(S)	None	High

**Chandeleur Tertiary Survey Area South Magnetometer Data**

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
004-1-nm- 19.5g- 101.3f	4077826.8	550145.6	4	1	Negative Monopolar	19.5g	101.3f	Moderate Object(s)	None	Moderate
005-1-pm- 20.7g- 146.6f	4077787	550407.5	5	1	Positive Monopolar	20.7g	146.6f	Moderate Object(s)	None	Moderate

**Chandeleur Tertiary Survey Area North Magnetometer Data**

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
003-1-pm-3g- 161.5f	4078392.1	552364.7	3	1	Positive Monopolar	3g	161.5f	Small Object(s)	None	Ballast Pile
003-2-dp-	4078212.7	552551.2	3	2	Dipolar	14.9g	284.9f	Moderate Object(s)	None	High

Anomaly	X Coordinate	Y Coordinate	Line #	Anomaly #	Signature	Gammas	Duration	Analysis	Sonar Association	Cultural Resource Potential
14.9g-284.9f										
004-1-nm-2.4g-125.4f	4078644.6	552160.1	4	1	Negative Monopolar	2.4g	125.4f	Small Object(s)	None	High
004-2-mc-10.4g-200.4f	4078397.5	552447.7	4	2	Multicomponent	10.4g	200.4f	Moderate Object(s)	None	Ballast Pile
004-3-nm-4.9g-102.1f	4078234.1	552613.7	4	3	Negative Monopolar	4.9g	102.1f	Small Object(s)	None	High
005-1-dp-11.8g-230.5f	4078693.1	552157.6	5	1	Dipolar	11.8g	230.5f	Moderate Object(s)	None	High
005-2-nm-5.9g-239.1f	4078443.1	552455.5	5	2	Negative Monopolar	5.9g	239.1f	Moderate Object(s)	None	Ballast Pile
005-3-nm-1.2g-90.5f	4078290.1	552617.3	5	3	Negative Monopolar	1.2g	90.5f	Small Object(s)	None	High
006-1-nm-4.7g-113.5f	4078714.6	552218.4	6	1	Negative Monopolar	4.7g	113.5f	Small Object(s)	None	High

## **APPENDIX NN: CHANDELEUR SIDESCAN SONAR DATA**

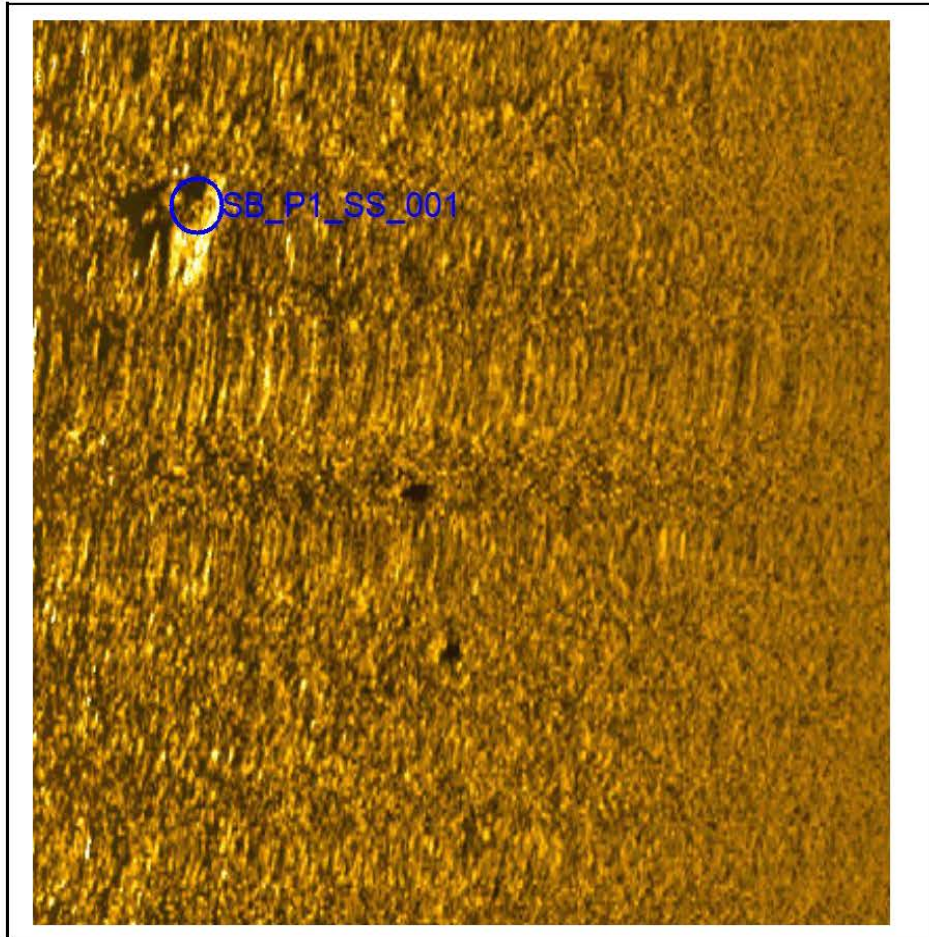
**Chandeleur Secondary Area North Sidescan Sonar Data**

<b>Sonar Target</b>	<b>X Coordinate</b>	<b>Y Coordinate</b>	<b>Assessment</b>	<b>Anomaly Association</b>	<b>Cultural Resource Potential</b>
SSS 008	4078463.5	552039.6	Possible Trap	No	Low
SSS 009	4078419.4	552443.4	Small Single Object	017-1, 08-1 and 09-1	<b>High Ballast Pile Proximity</b>
SSS 010	4078193.2	552736.5	Small Single Linear Object	No	Moderate
SSS 011	4078024.7	552295.9	Small Single Object	No	Moderate
SSS 012	4078469.1	552709.8	Small Single Object	No	Moderate
SSS 013	4078567.7	552800.2	Small Single Object	No	Moderate

## **APPENDIX OO: SEISMIC DATA (DIGITAL COPY ONLY)**

This appendix includes seismic records collected in the study area. Because the files are in HTML format, they will be included only on the CDs.

**APPENDIX PP: 2013 SIDESCAN SONAR AND SEISMIC CONTACT SHEETS**



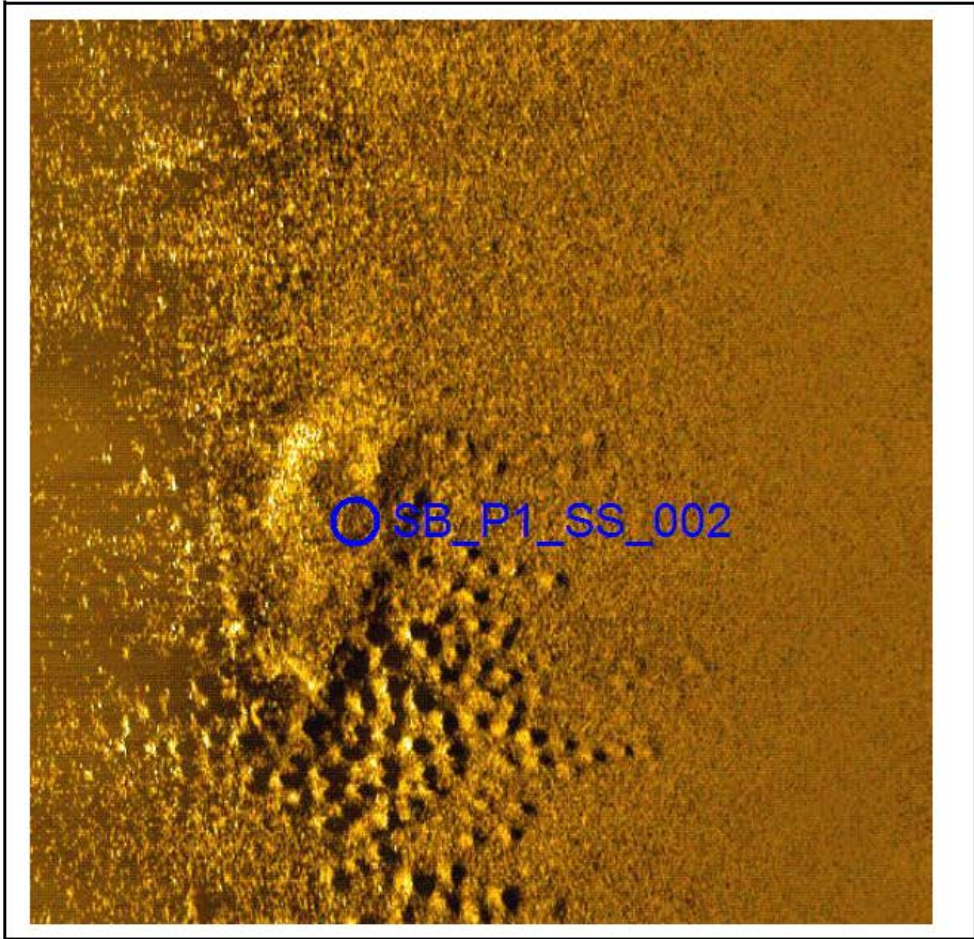
#### SB\_P1\_SS\_001

- Sonar Time at Target: 9/6/2013 6:45:32 PM
- Click Position  
29° 30.43887' N 093° 36.03172' W (WGS84)  
(X) 2659895.56 (Y) 373448.34 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 434441
- Range to target: 26.55
- Fish Height: 4.47
- Heading: 128.300 Degrees
- Event Number: 0
- Line Name: SB\_P1\_001\_S
- Water Depth: 0.00
- Positioning System to Sensor: 0.0000

#### Dimensions and attributes

- Target Width: 3.79
- Target Height: 0.63
- Target Length: 7.98
- Target Shadow: 3.32



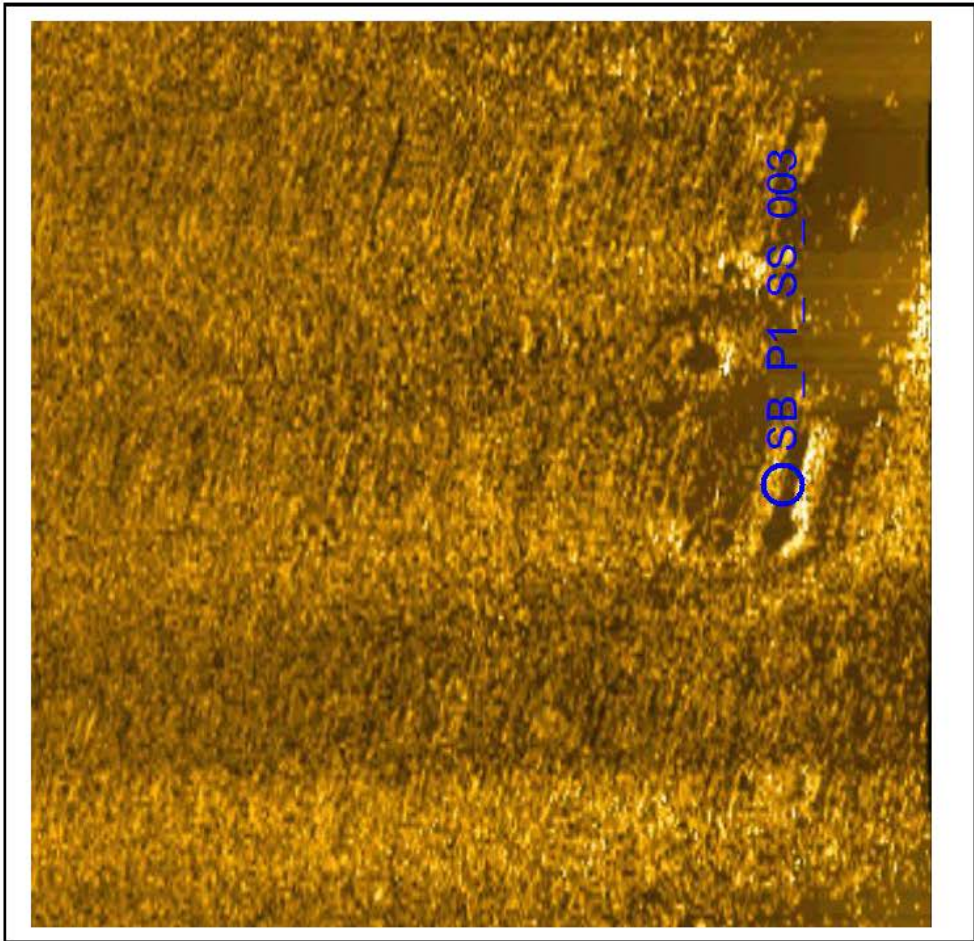


**SB\_P1\_SS\_002**

- Sonar Time at Target: 9/8/2013 8:59:41 PM
- Click Position  
29° 30.42934' N 093° 36.10813' W (WGS84)  
(X) 2559289.69 (Y) 373410.75 (Projected Coordinates)
- Map Projection: LA83-SF-MCD
- Ping Number: 449724
- Range to target: 25.80
- Fish Height: 4.82
- Heading: 26.790 Degrees
- Event Number: 0
- Line Name: SB\_P1\_005\_N
- Water Depth: 0.00
- Positioning System to Sensor: 0.0000

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



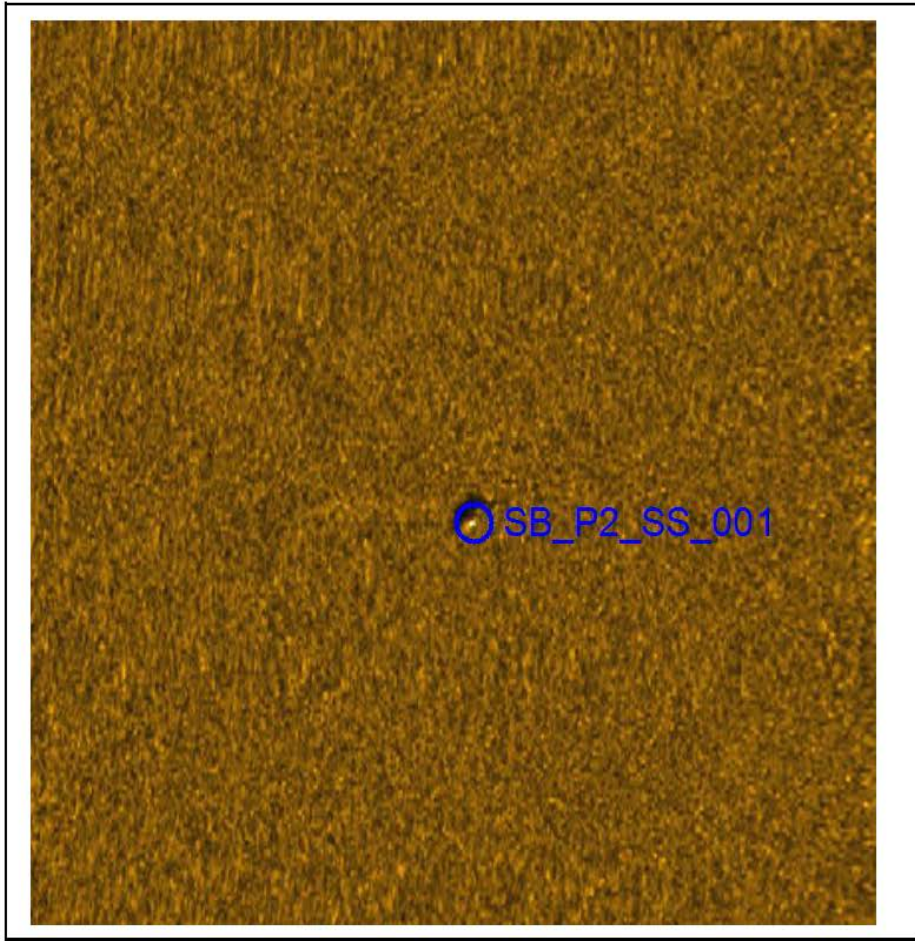
**SB\_P1\_SS\_003**

- Sonar Time at Target: 9/6/2013 7:53:47 PM
- Click Position  
29° 30.01166' N 093° 36.20644' W (WGS84)  
(X) 2568718.44 (Y) 370890.12 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 508089
- Range to target: 36.10
- Fish Height: 5.95
- Heading: 131.690 Degrees
- Event Number: 0
- Line Name: SB\_P1\_025\_S
- Water Depth: 0.00
- Positioning System to Sensor: 0.0000

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



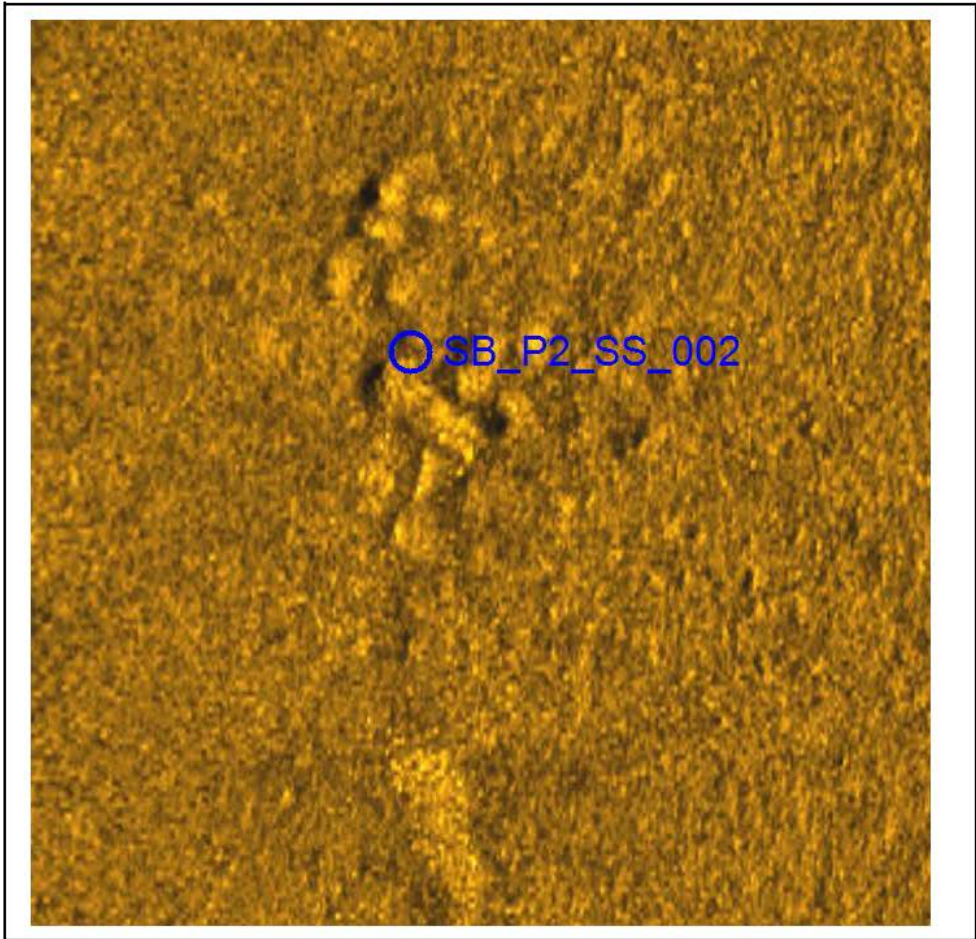


**SB\_P2\_SS\_001**

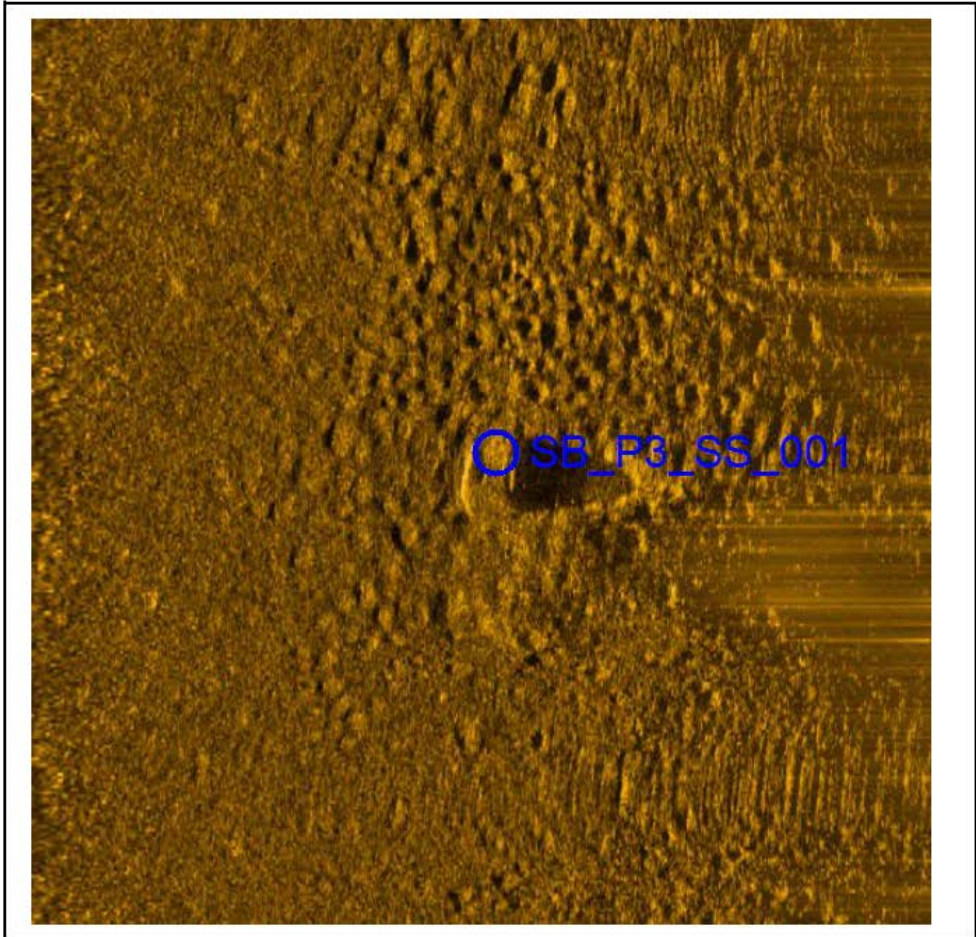
- Sonar Time at Target: 9/6/2013 4:48:44 PM
- Click Position  
29° 30.67044' N 093° 35.79767' W (WGS84)  
(X) 2560964.13 (Y) 374839.19 (Projected Coordinates)
- Map Projection: LA83-SF-MDD
- Ping Number: 308392
- Range to target: 14.08
- Fish Height: 6.19
- Heading: 136.100 Degrees
- Event Number: 0
- Line Name: SB\_P2\_020\_S
- Water Depth: 0.00
- Positioning System to Sensor: 0.0000

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00

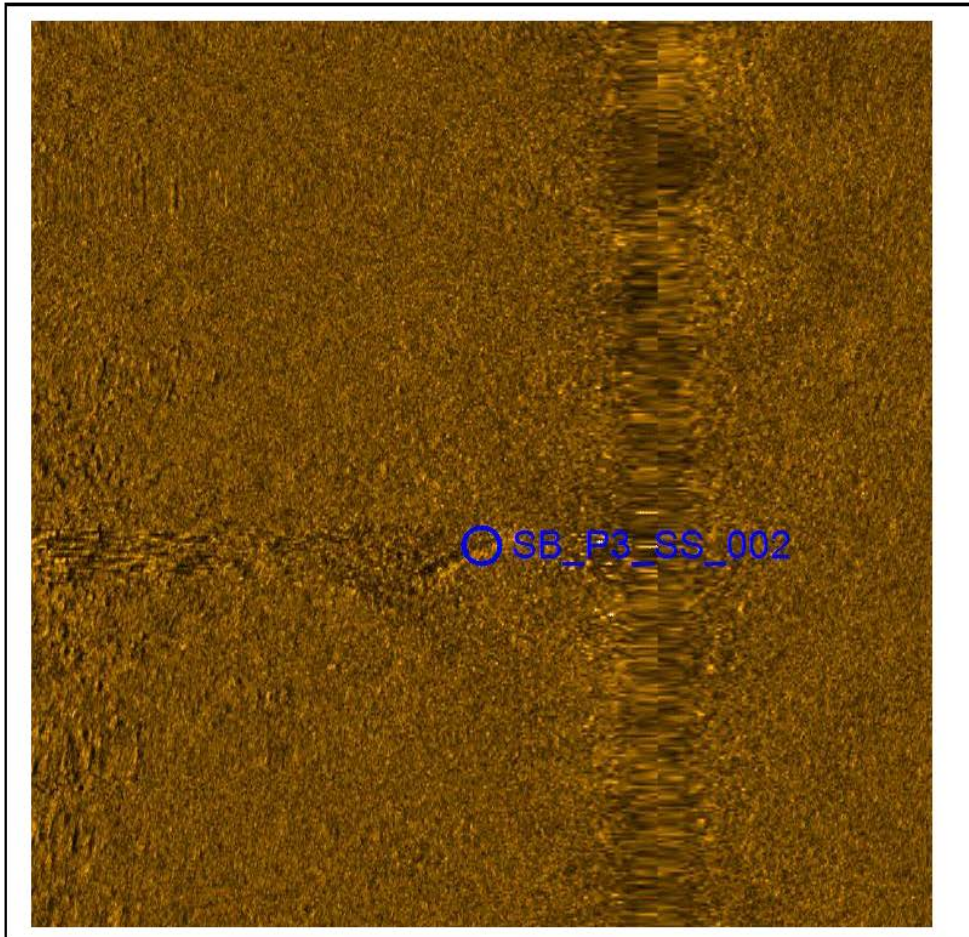


<p><b>SB_P2_SS_002</b></p> <ul style="list-style-type: none"><li>• Sonar Time at Target: 9/6/2013 4:51:19 PM</li><li>• Click Position 29° 30.50570' N 093° 35.76756' W (WGS84) (X) 2561104.00 (Y) 373837.77 (Projected Coordinates)</li><li>• Map Projection: LA83-SF-MOD</li><li>• Ping Number: 311157</li><li>• Range to target: 10.95</li><li>• Fish Height: 5.45</li><li>• Heading: 128.390 Degrees</li><li>• Event Number: 0</li><li>• Line Name: SB_P2_020_S</li><li>• Water Depth: 0.00</li><li>• Positioning System to Sensor: 0.0000</li></ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"><li>• Target Width: 20.34</li><li>• Target Height: 0.41</li><li>• Target Length: 24.36</li><li>• Target Shadow: 0.94</li></ul>
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<p><b>SB_P3_SS_001</b></p> <ul style="list-style-type: none"><li>• Sonar Time at Target: 3/5/2013 5:14:55 PM</li><li>• Click Position 23° 30.88857' N 099° 27.50081' W (WGS84) (X) 2604940.70 (Y) 373985.68 (Projected Coordinates)</li><li>• Map Projection: LA83-SF-MOD</li><li>• Ping Number: 43503</li><li>• Range to target: 19.94</li><li>• Fish Height: 6.03</li><li>• Heading: 152.690 Degrees</li><li>• Event Number: 0</li><li>• Line Name: SB_P3_103_S</li><li>• Water Depth: 0.00</li></ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"><li>• Target Width: 0.00</li><li>• Target Height: 0.00</li><li>• Target Length: 0.00</li><li>• Target Shadow: 0.00</li></ul>
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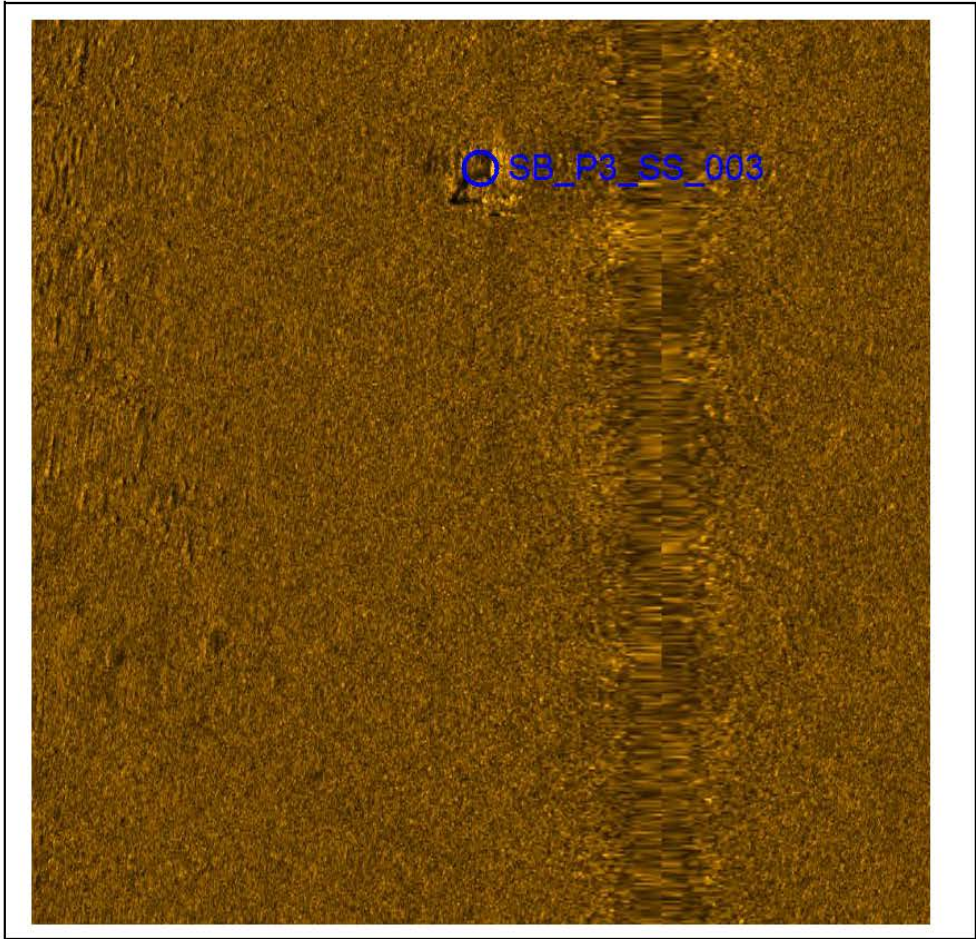


**SB\_P3\_SS\_002**

- Sonar Time at Target: 9/5/2013 7:00:27 PM
- Click Position  
29° 30.67008' N 093° 27.39865' W (WGS84)  
(X) 2605482.38 (Y) 373984.77 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 157416
- Range to target: 7.79
- Fish Height: 7.16
- Heading: 99.590 Degrees
- Event Number: 0
- Line Name: SB\_P3\_009\_E
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



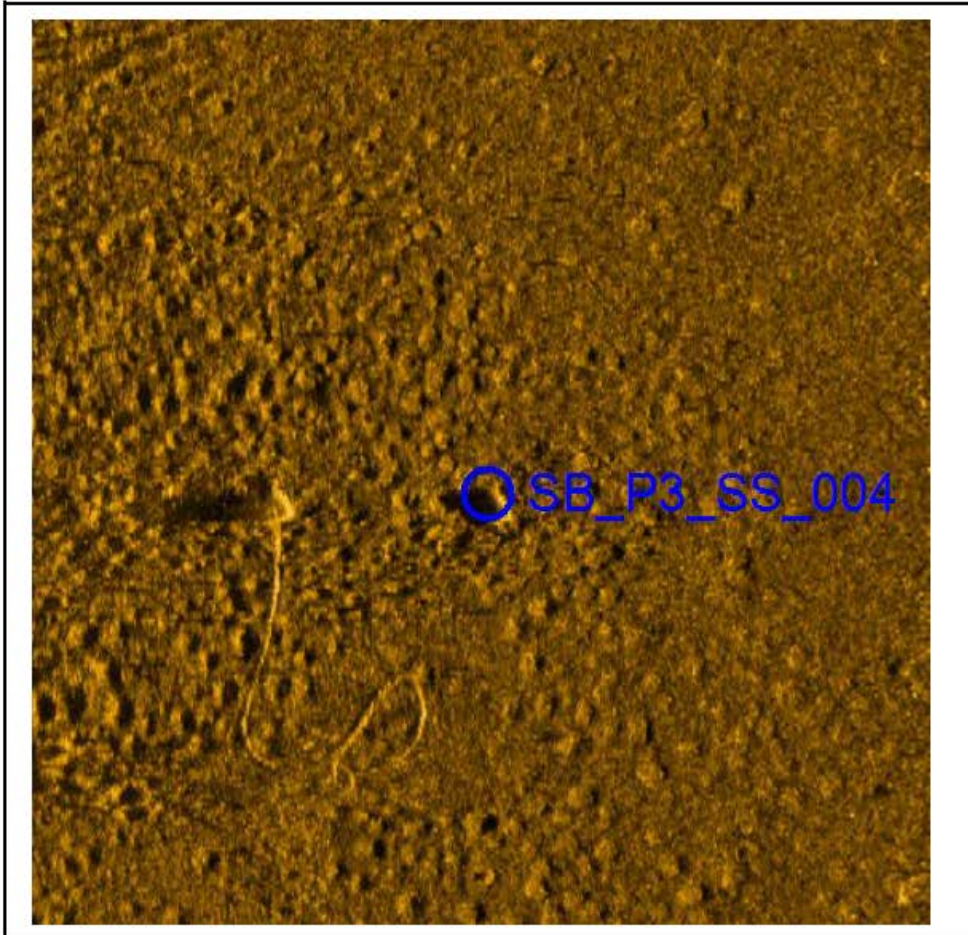
**SB\_P3\_SS\_003**

- Sonar Time at Target: 9/5/2013 7:00:40 PM
- Click Position  
29° 30.66274' N 093° 27.38558' W (WGS84)  
(X) 2605550.83 (Y) 373939.04 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 157640
- Range to target: 8.04
- Fish Height: 7.24
- Heading: 102.300 Degrees
- Event Number: 0
- Line Name: SB\_P3\_009\_E.001
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00





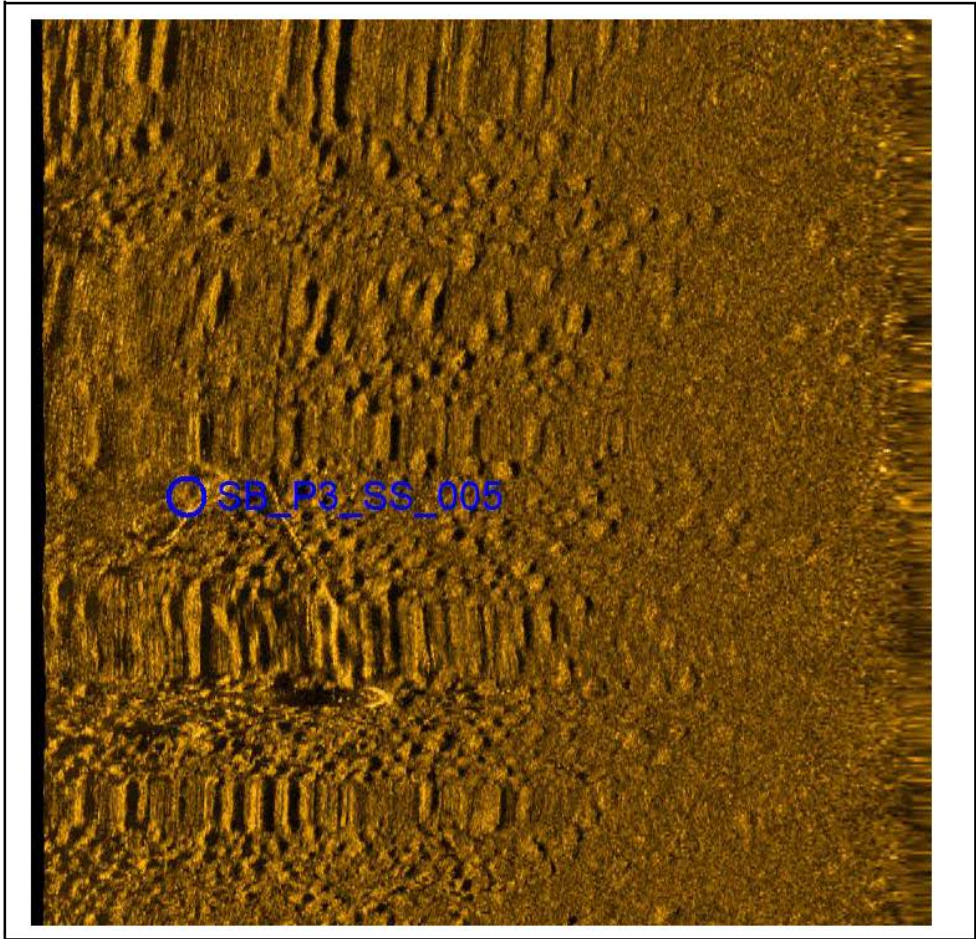
**SB\_P3\_SS\_004**

- Sonar Time at Target: 9/6/2013 7:08:14 PM
- Click Position  
29° 30.61443' N 093° 27.40136' W (WGS84)  
(X) 2605461.80 (Y) 373647.83 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 165813
- Range to target: 20.15
- Fish Height: 7.43
- Heading: 343.500 Degrees
- Event Number: 0
- Line Name: SB\_P3\_013\_W
- Water Depth: 0.00

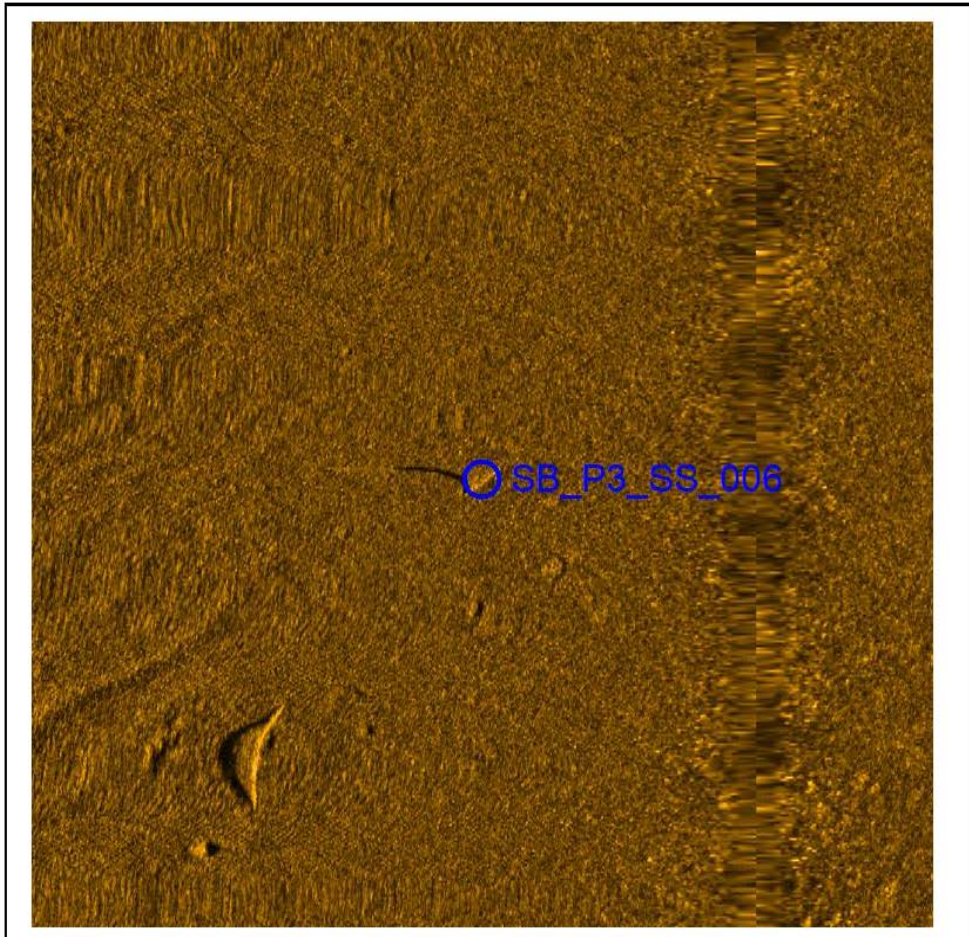
**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00





<p><b>SB_P3_SS_005</b></p> <ul style="list-style-type: none"><li>• Sonar Time at Target: 9/6/2013 7:28:46 P M</li><li>• Click Position 29° 30.61670' N 093° 27.41100' W (WGS84) (X) 2605410.94 (Y) 373662.51 (Projected Coordinates)</li><li>• Map Projection: LA83-SF-MOD</li><li>• Ping Number: 187976</li><li>• Range to target: 32.95</li><li>• Fish Height: 7.04</li><li>• Heading: 87.590 Degrees</li><li>• Event Number: 0</li><li>• Line Name: SB_P3_017_W.001</li><li>• Water Depth: 0.00</li></ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"><li>• Target Width: 0.00</li><li>• Target Height: 0.00</li><li>• Target Length: 0.00</li><li>• Target Shadow: 0.00</li></ul>
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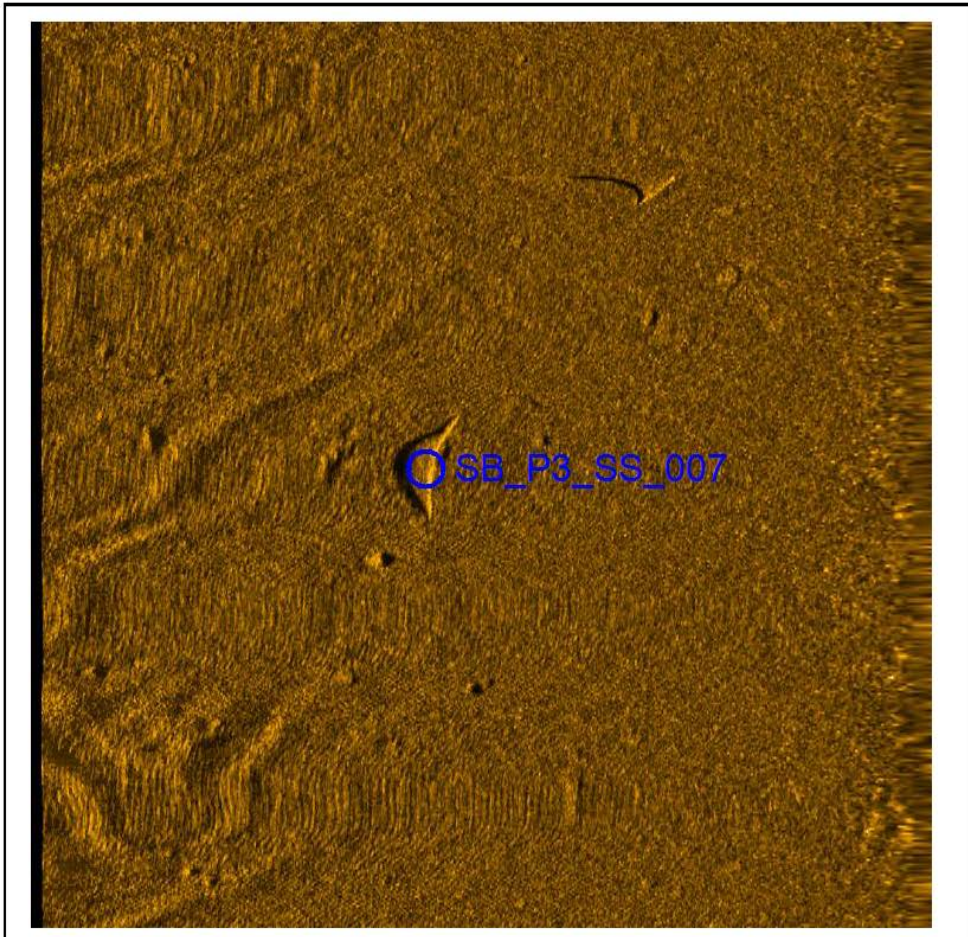
#### **SB\_P3\_SS\_006**

- Sonar Time at Target: 9/5/2013 8:40:03 PM
- Click Position  
29° 30.60295' N 093° 27.54125' W (WGS84)  
(X) 2604719.00 (Y) 373592.00 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 264904
- Range to target: 12.10
- Fish Height: 6.07
- Heading: 95.900 Degrees
- Event Number: 0
- Line Name: SB\_P3\_022\_E
- Water Depth: 0.00

#### **Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



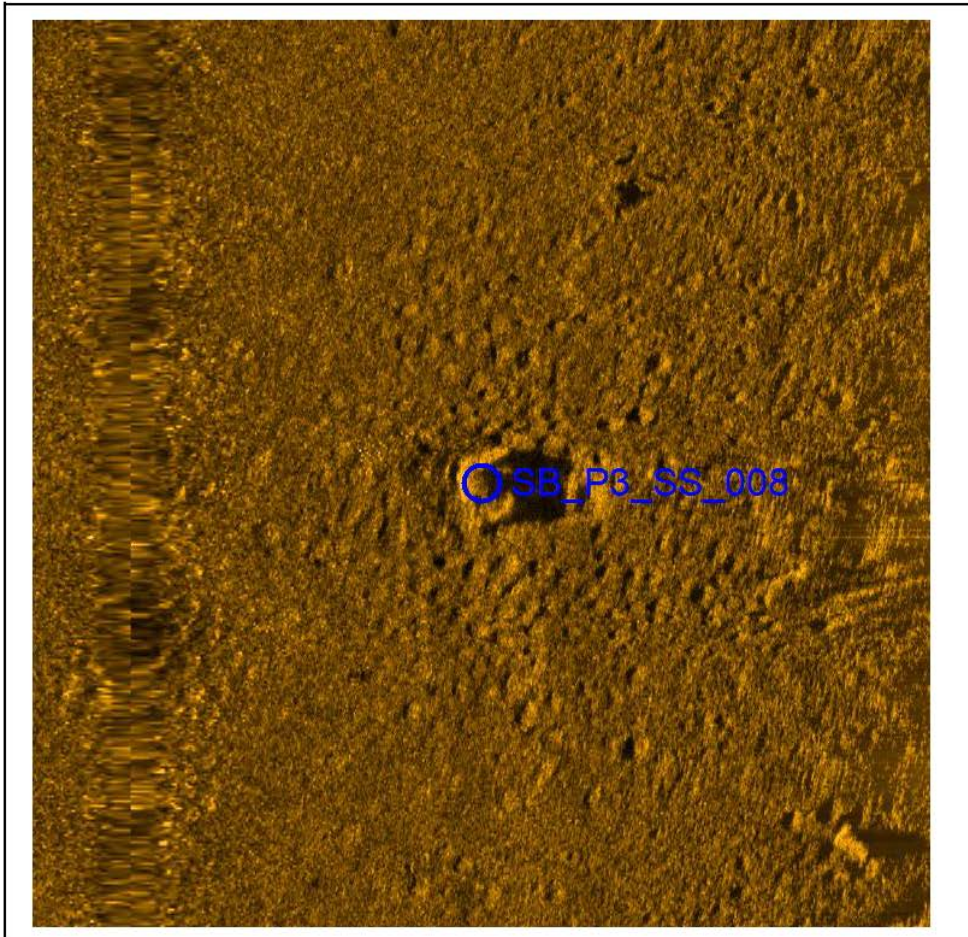


#### SB\_P3\_SS\_007

- Sonar Time at Target: 9/5/2013 8:40:10 PM
- Click Position  
29° 30.60613' N 093° 27.53215' W (WGS84)  
(X) 2604767.61 (Y) 373610.37 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 265023
- Range to target: 22.38
- Fish Height: 6.07
- Heading: 97.590 Degrees
- Event Number: 0
- Line Name: SB\_P3\_022\_E
- Water Depth: 0.00

#### Dimensions and attributes

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



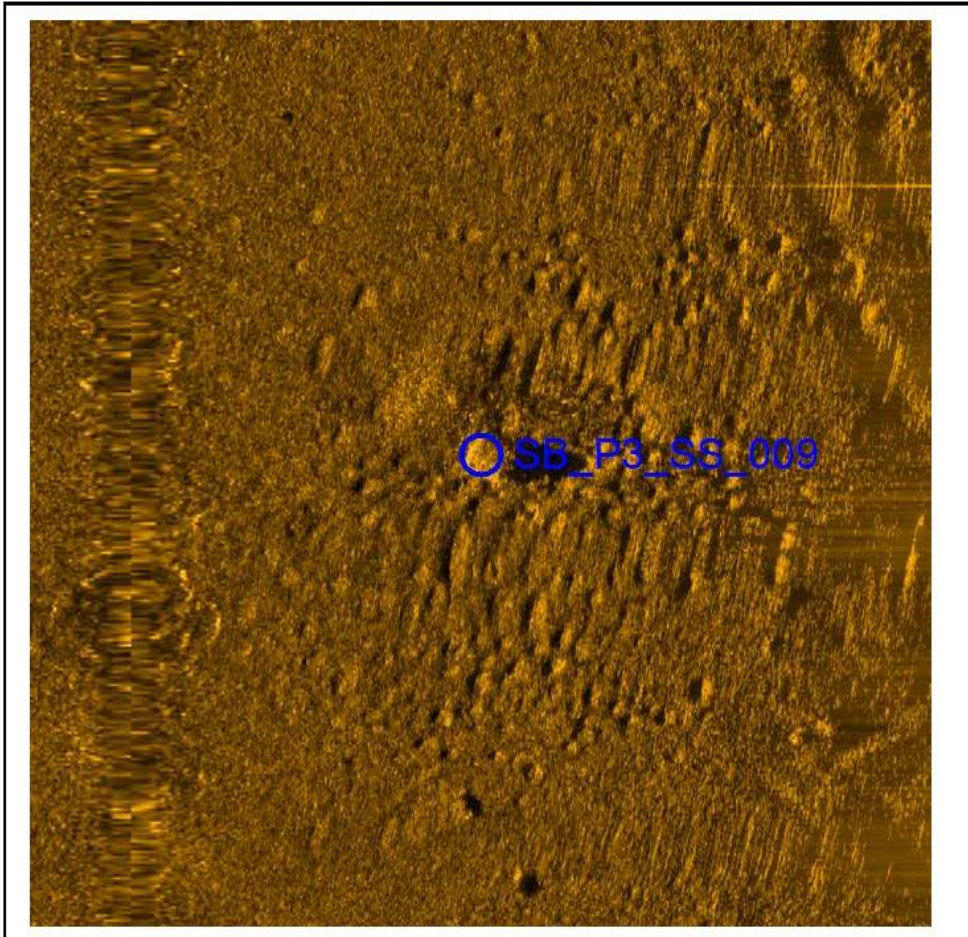
**SB\_P3\_SS\_008**

- Sonar Time at Target: 9/5/2013 8:40:13 PM
- Click Position  
29° 30.58545' N 093° 27.53454' W (WGS84)  
(X) 2604752.60 (Y) 373485.29 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 265088
- Range to target: 15.57
- Fish Height: 6.34
- Heading: 87.800 Degrees
- Event Number: 0
- Line Name: SB\_P3\_022\_E
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



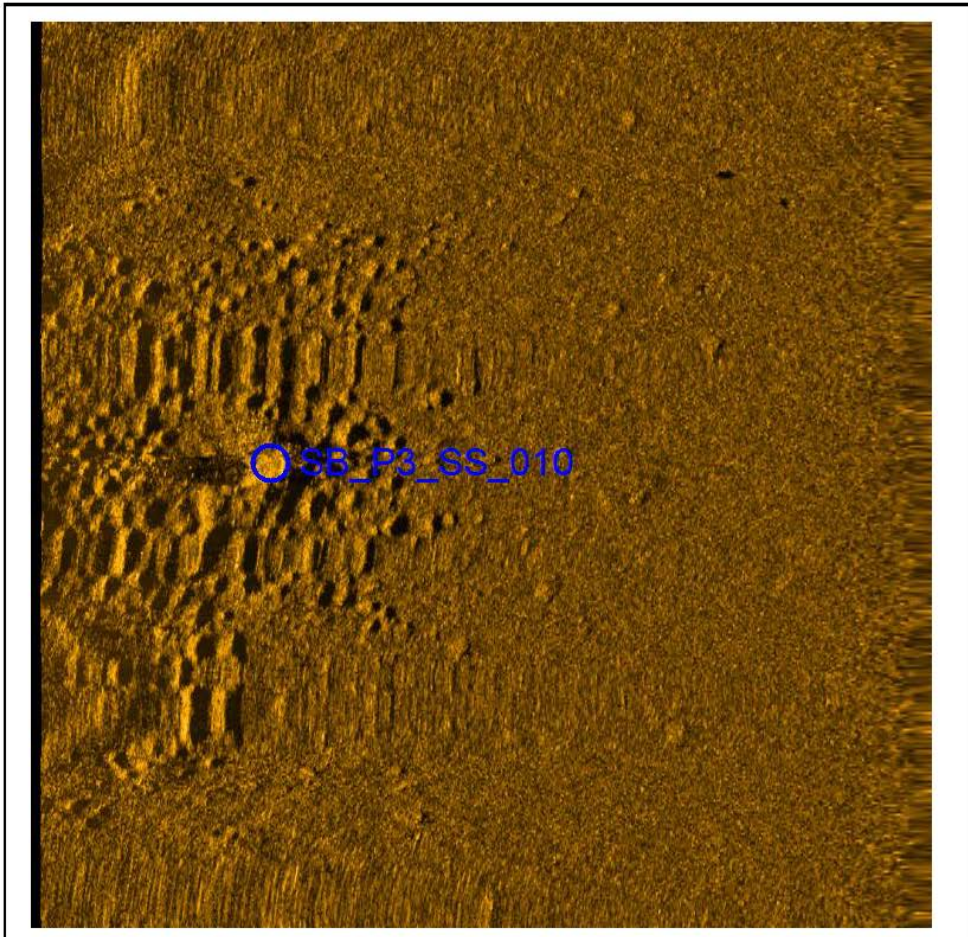


**SB\_P3\_SS\_009**

- Sonar Time at Target: 9/5/2013 8:40:38 PM
- Click Position  
29° 30.57961' N 093° 27.50587' W (WGS84)  
(X) 2604903.92 (Y) 373447.12 (Projected Coordinates)
- Map Projection: LA83-SF-MDD
- Ping Number: 265528
- Range to target: 15.48
- Fish Height: 5.91
- Heading: 92.690 Degrees
- Event Number: 0
- Line Name: SB\_P3\_022\_E
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



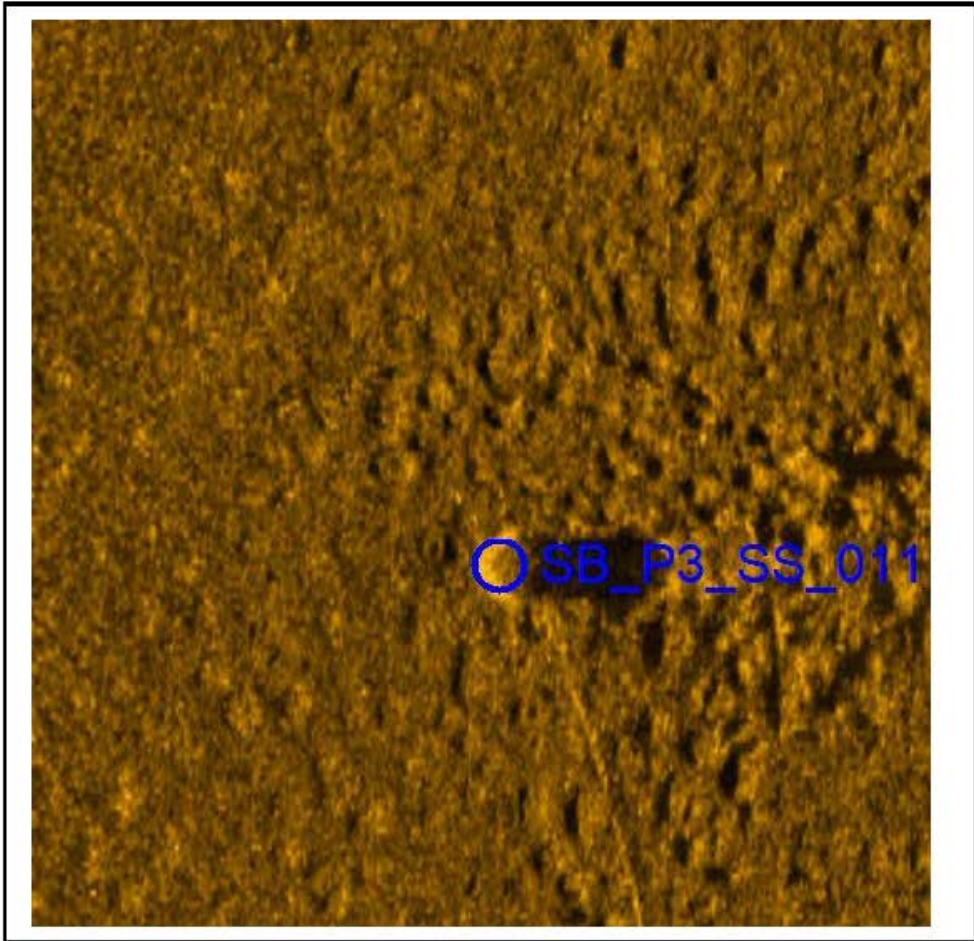
**SB\_P3\_SS\_010**

- Sonar Time at Target: 9/5/2013 8:41:15 PM
- Click Position  
29° 30.58681' N 093° 27.45363' W (WGS84)  
(X) 2605181.62 (Y) 373485.60 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 266201
- Range to target: 29.27
- Fish Height: 6.03
- Heading: 97.900 Degrees
- Event Number: 0
- Line Name: SB\_P3\_022\_E
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00

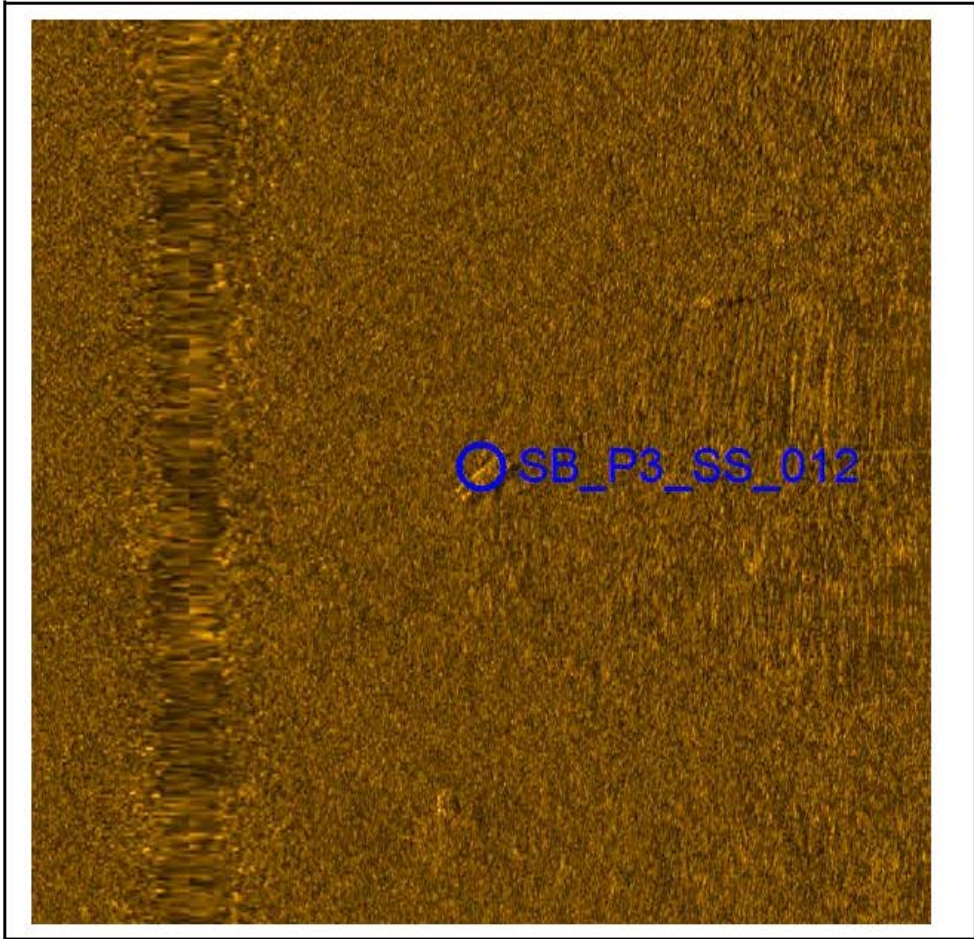


**SB\_P3\_SS\_011**

- Sonar Time at Target: 9/5/2013 10:56:45 PM
- Click Position  
29° 30.61071' N 093° 27.40289' W (WGS84)  
(X) 2605463.24 (Y) 373625.44 (Projected Coordinates)
- Map Projection: LA83-SF-MCD
- Ping Number: 412425
- Range to target: 15.94
- Fish Height: 6.46
- Heading: 310.600 Degrees
- Event Number: 0
- Line Name: SB\_P3\_015\_W
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



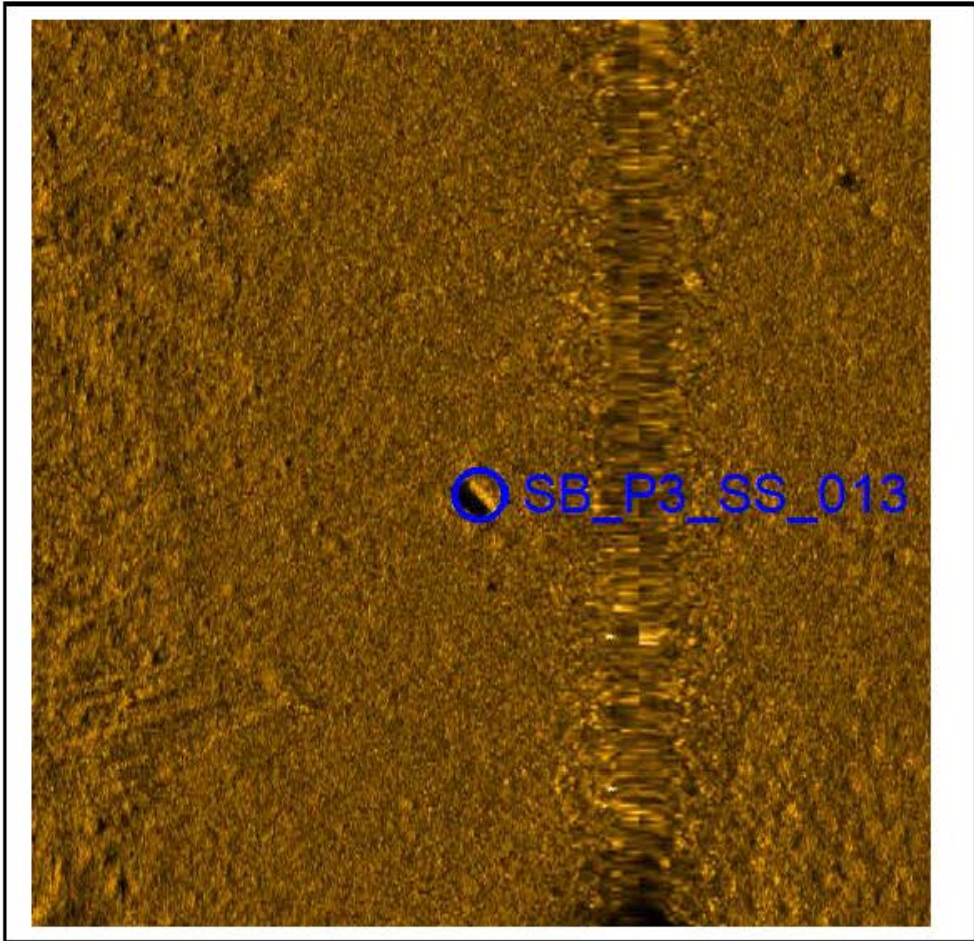
**SB\_P3\_SS\_012**

- Sonar Time at Target: 9/5/2013 10:58:29 PM
- Click Position  
29° 30.85679' N 093° 27.53047' W (WGS84)  
(X) 2804782.19 (Y) 373917.19 (Projected Coordinates)
- Map Projection: LA83-SF-MCD
- Ping Number: 414299
- Range to target: 12.92
- Fish Height: 5.80
- Heading: 330.200 Degrees
- Event Number: 0
- Line Name: SB\_P3\_015\_W
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



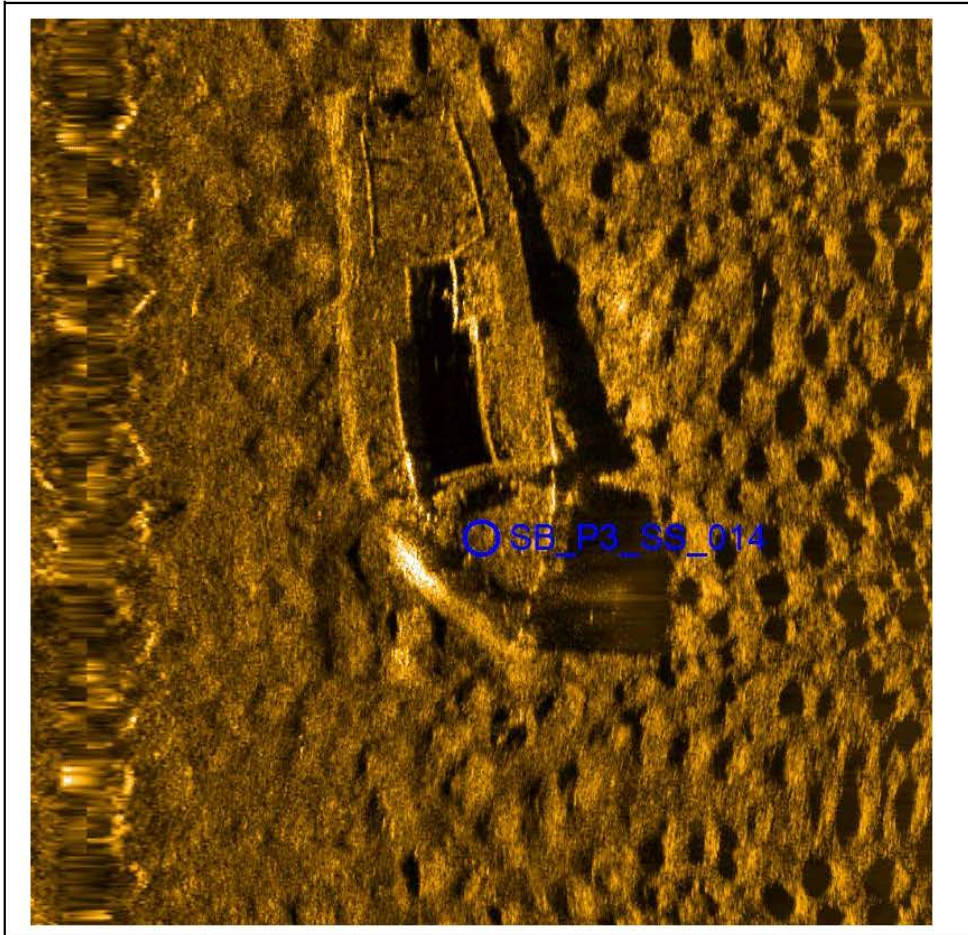


**SB\_P3\_SS\_013**

- Sonar Time at Target: 9/5/2013 11:25:30 PM
- Click Position  
29° 30.57269' N 093° 27.51820' W (WGS84)  
(X) 2604837.77 (Y) 373406.39 (Projected Coordinates)
- Map Projection: LA83-SF-MCC
- Ping Number: 443454
- Range to target: 7.03
- Fish Height: 6.03
- Heading: 330.500 Degrees
- Event Number: 0
- Line Name: SB\_P3\_023\_W
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



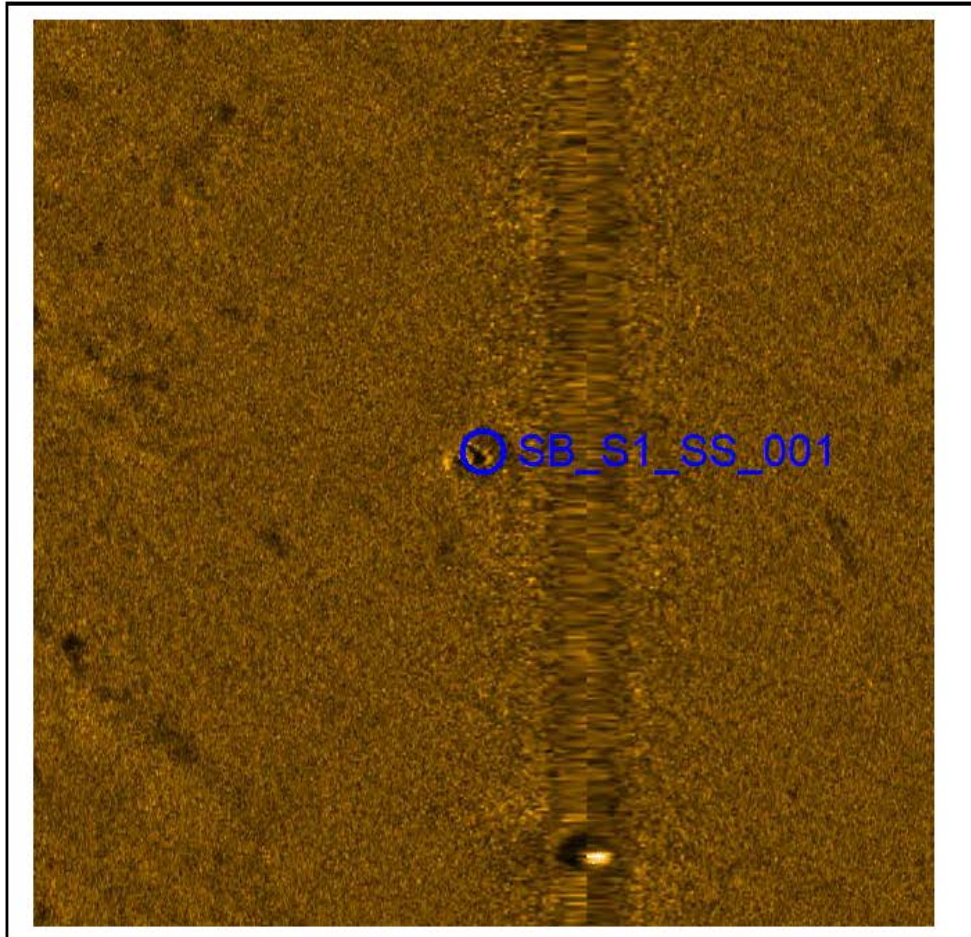
#### SB\_P3\_SS\_014

- Sonar Time at Target: 9/6/2013 1:46:38 AM
- Click Position  
29° 30.73525' N 093° 27.75201' W (WGS84)  
(X) 2603616.77 (Y) 374414.46 (Projected Coordinates)
- Map Projection: LA63-SF-MOD
- Ping Number: 604113
- Range to target: 10.88
- Fish Height: 3.88
- Heading: 296.700 Degrees
- Event Number: 0
- Line Name: SB\_P3\_015a\_E
- Water Depth: 0.00

#### Dimensions and attributes

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



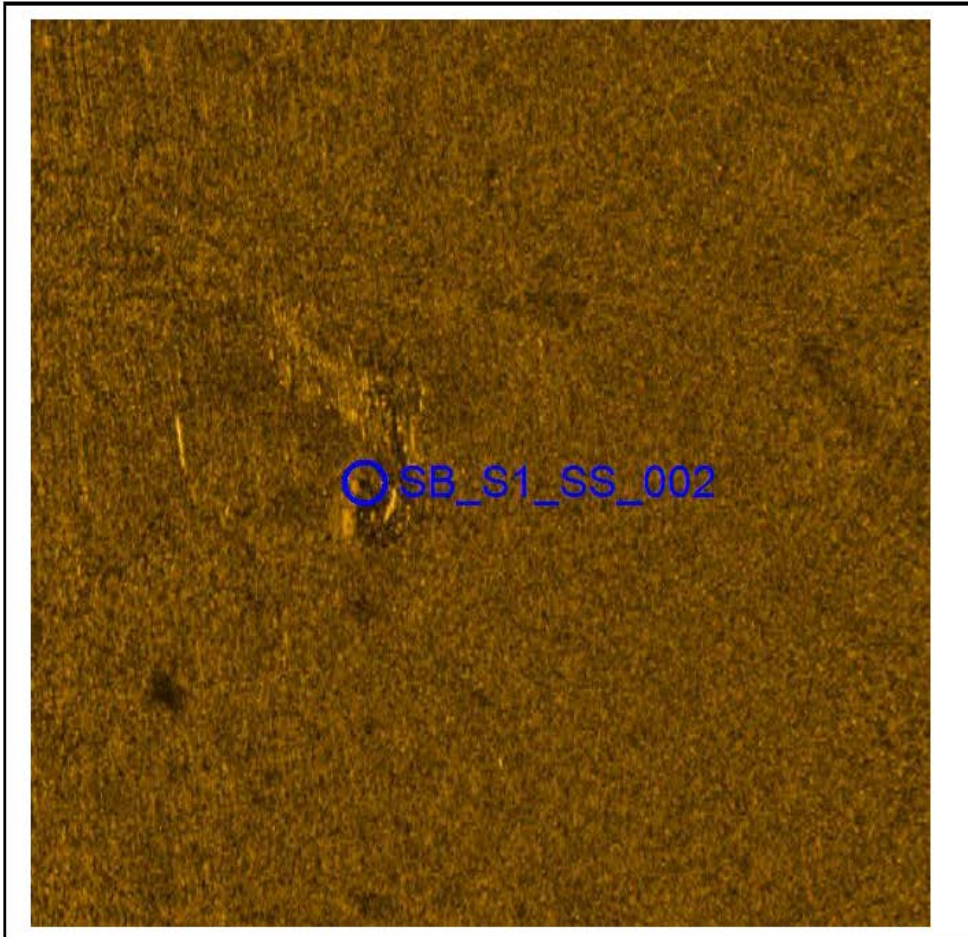


#### SB\_S1\_SS\_001

- Sonar Time at Target: 9/8/2013 1:34:06 AM
- Click Position
  - 29° 24.13063' N 093° 53.13882' W (WGS84)
  - 29° 24.13063' N 093° 53.13882' W (LocalL)
  - (X) 2468169.51 (Y) 337144.12 (Projected Coordinates)
- Map Projection: LA83-SF-MDD
- Ping Number: 175358
- Range to target: 4.57
- Fish Height: 7.78
- Heading: 47.290 Degrees
- Event Number: 0
- Line Name: SB\_S1\_027\_N
- Water Depth: 0.00
- Positioning System to Sensor: 0.0000

#### Dimensions and attributes

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00
- Description:



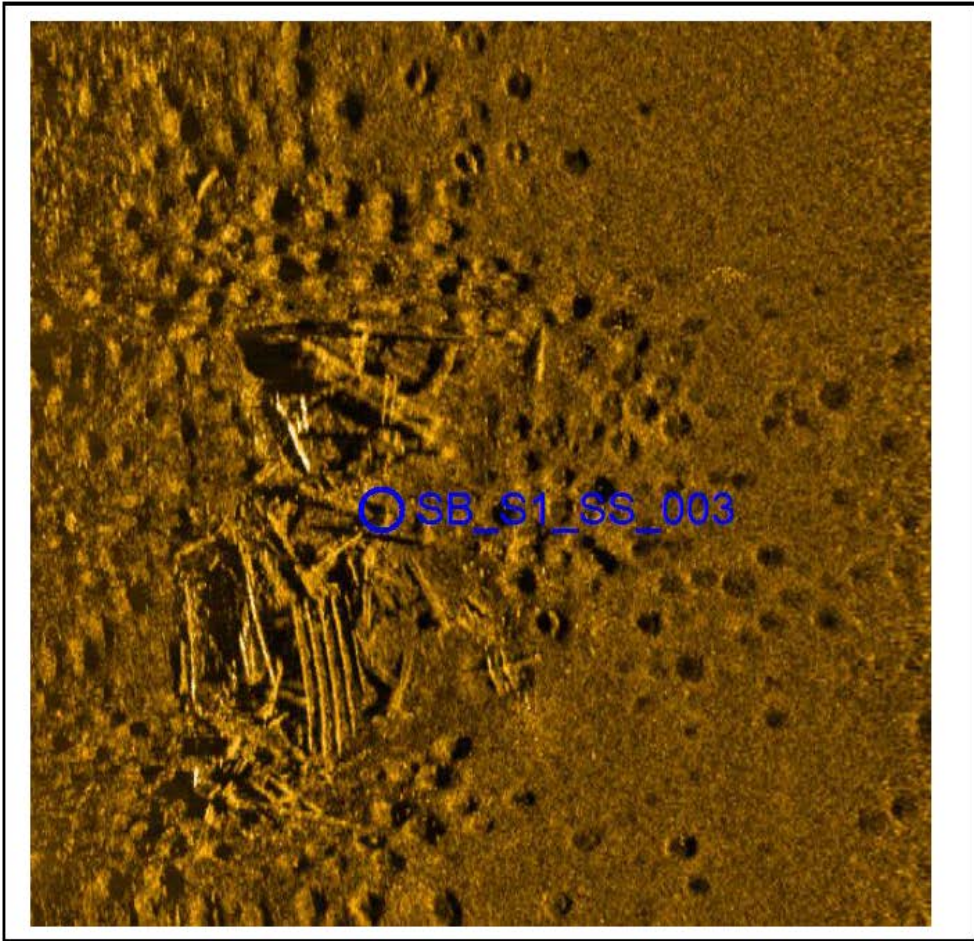
**SB\_S1\_SS\_002**

- Sonar Time at Target: 9/8/2013 1:59:48 AM
- Click Position
  - 29° 24.13067' N 093° 53.19771' W (WGS84)
  - 29° 24.13067' N 093° 53.19771' W (LocalLL)
  - (X) 2468175.45 (Y) 397144.27 (Projected Coordinates)
- Map Projection: LA93-SF-MOD
- Ping Number: 203059
- Range to target: 24.61
- Fish Height: 7.96
- Heading: 36.290 Degrees
- Event Number: 0
- Line Name: SB\_S1\_026\_N
- Water Depth: 0.00
- Positioning System to Sensor: 0.0000

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00
- Description:



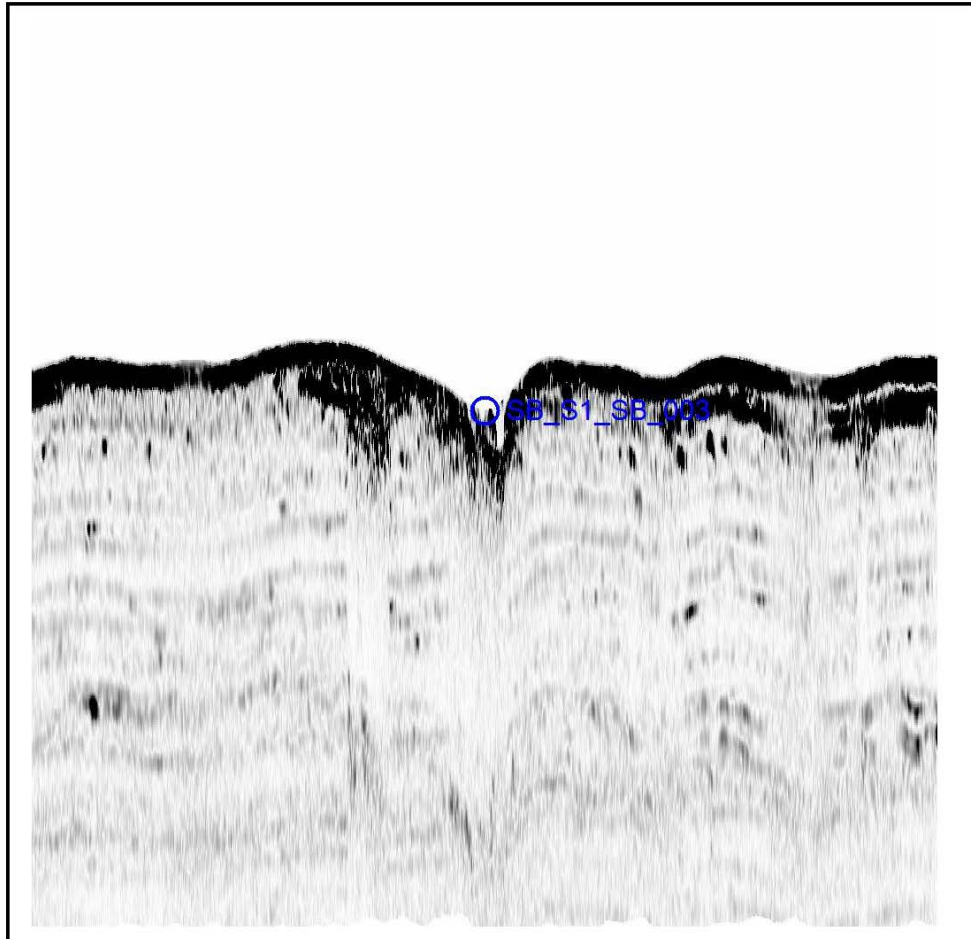


**SB\_S1\_SS\_003**

- Sonar Time at Target: 9/8/2013 1:08:41 AM
- Click Position
  - 29° 24.09821' N 093° 53.20532' W (WGS84)
  - 29° 24.09821' N 093° 53.20532' W (LocalL)
  - (X) 2467812.30 (Y) 336955.56 (Projected Coordinates)
- Map Projection: LA83-SF-MDD
- Ping Number: 147934
- Range to target: 24.41
- Fish Height: 7.70
- Heading: 27.790 Degrees
- Event Number: 0
- Line Name: SB\_S1\_033\_N
- Water Depth: 0.00
- Positioning System to Sensor: 0.0000

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00
- Description:

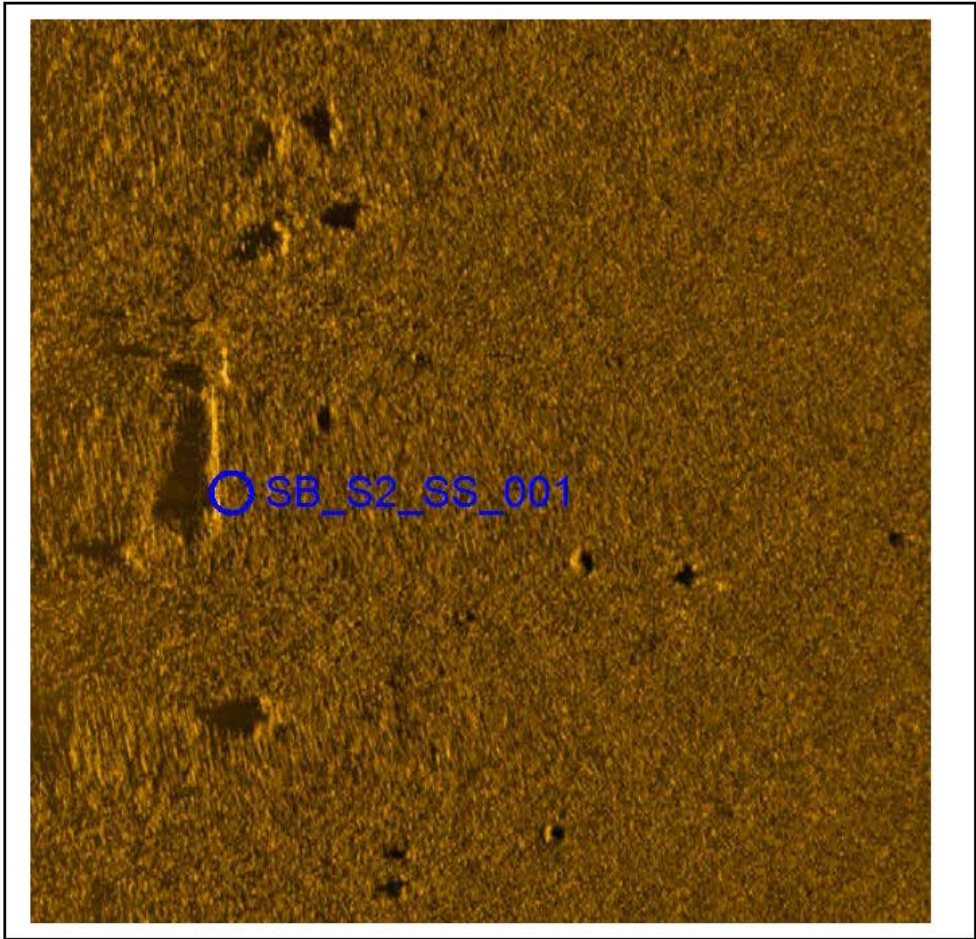


**SB\_S1\_SB\_003**

- Sonar Time at Target: 1/4/2003 1:30:00 PM
- Click Position  
29° 24.10198' N 093° 53.20384' W (WGS84)  
(X) 2467820.67 (Y) 336978.21 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 17942
- Range to target: 6.34
- Fish Height: 6.32
- Heading: 0.000 Degrees
- Event Number: 0
- Line Name: SB\_S1\_035\_S000
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00
- Classification2:



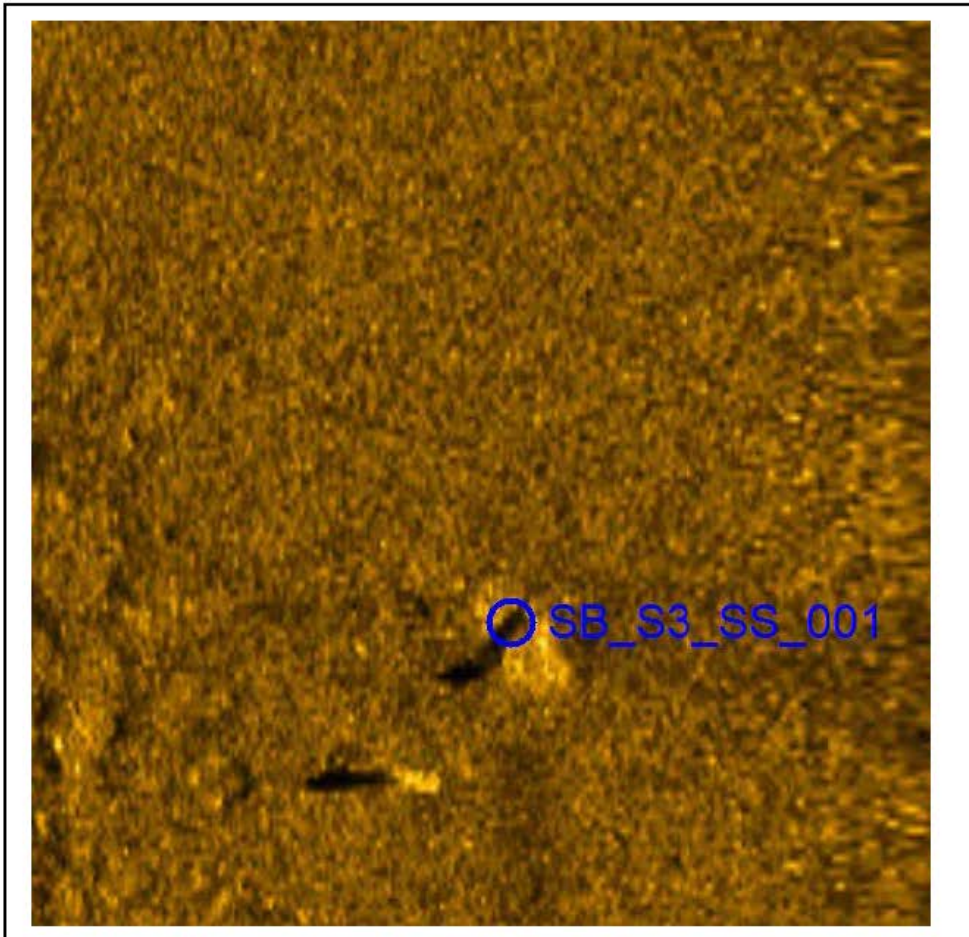
**SB\_S2\_SS\_001**

- Sonar Time at Target: 9/8/2013 9:20:22 AM
- Click Position  
29° 28.40901' N 093° 45.97058' W (WGS84)  
(X) 2506753.94 (Y) 362241.24 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 677353
- Range to target: 29.72
- Fish Height: 4.44
- Heading: 40.790 Degrees
- Event Number: 0
- Line Name: SB\_S2\_054\_N
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00





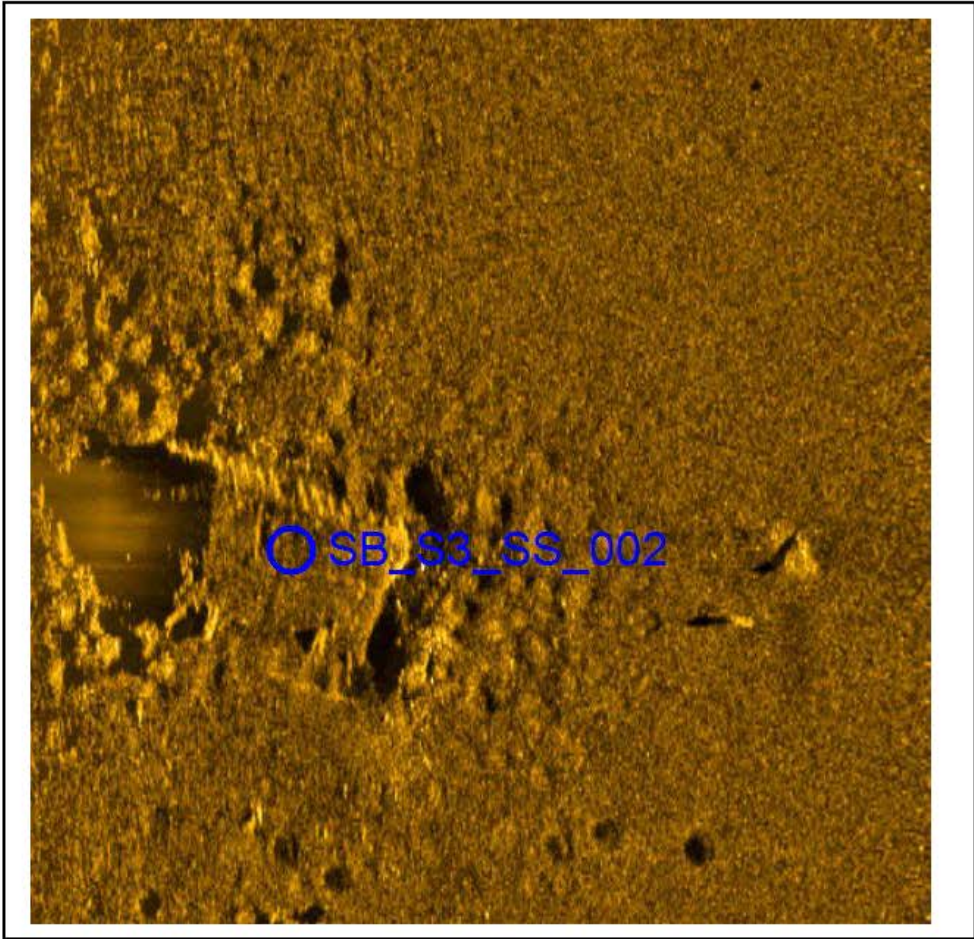
**SB\_S3\_SS\_001**

- Sonar Time at Target: 9/8/2013 3:14:40 AM
- Click Position
  - 29° 26.02250' N 093° 51.95222' W (WGS84)
  - (X) 2474718.85 (Y) 348467.88 (Projected Coordinates)
- Map Projection: LAG3-SF-MOD
- Ping Number: 283894
- Range to target: 8.95
- Fish Height: 6.61
- Heading: 35.700 Degrees
- Event Number: 0
- Line Name: SB\_S3\_018\_N
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



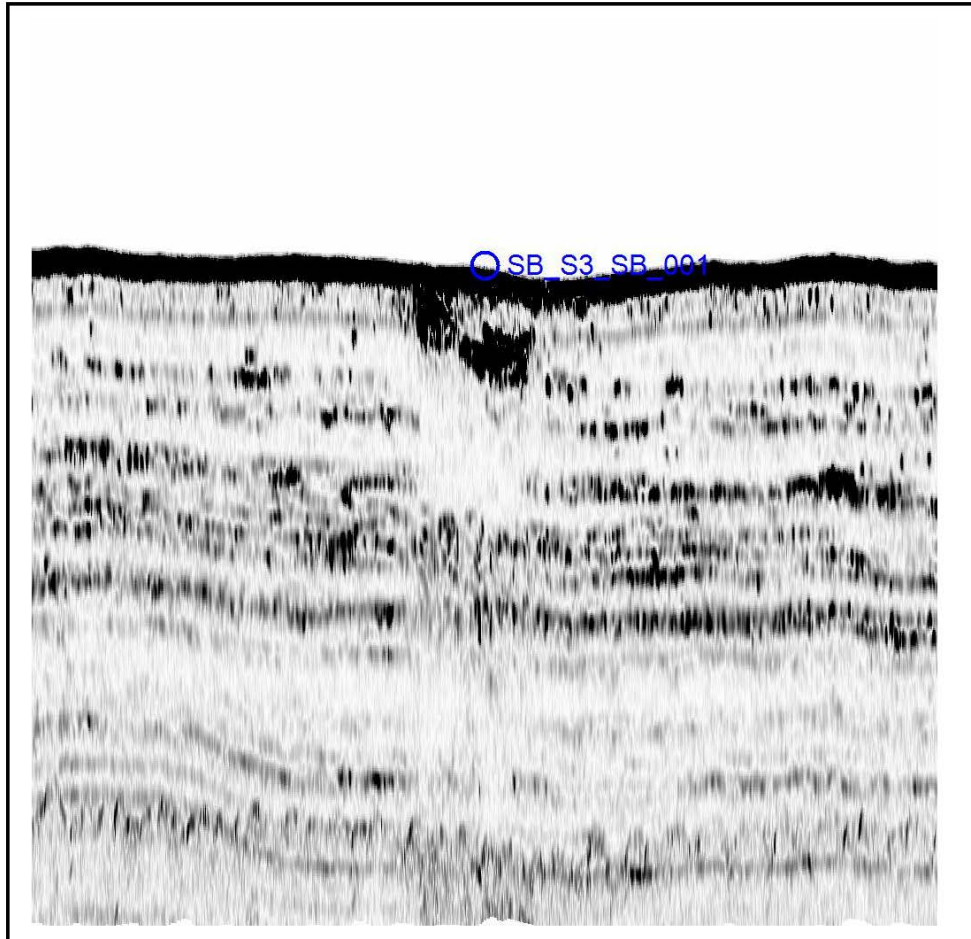


**SB\_S3\_SS\_002**

- Sonar Time at Target: 9/8/2013 3:14:40 AM
- Click Position
  - 29° 26.02254' N 093° 51.96376' W (WGS84)
  - (X) 2474657.68 (Y) 349469.45 (Projected Coordinates)
- Map Projection: LAG3-SF-MDD
- Ping Number: 283896
- Range to target: 27.60
- Fish Height: 6.61
- Heading: 37.500 Degrees
- Event Number: 0
- Line Name: SB\_S3\_018\_N
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00

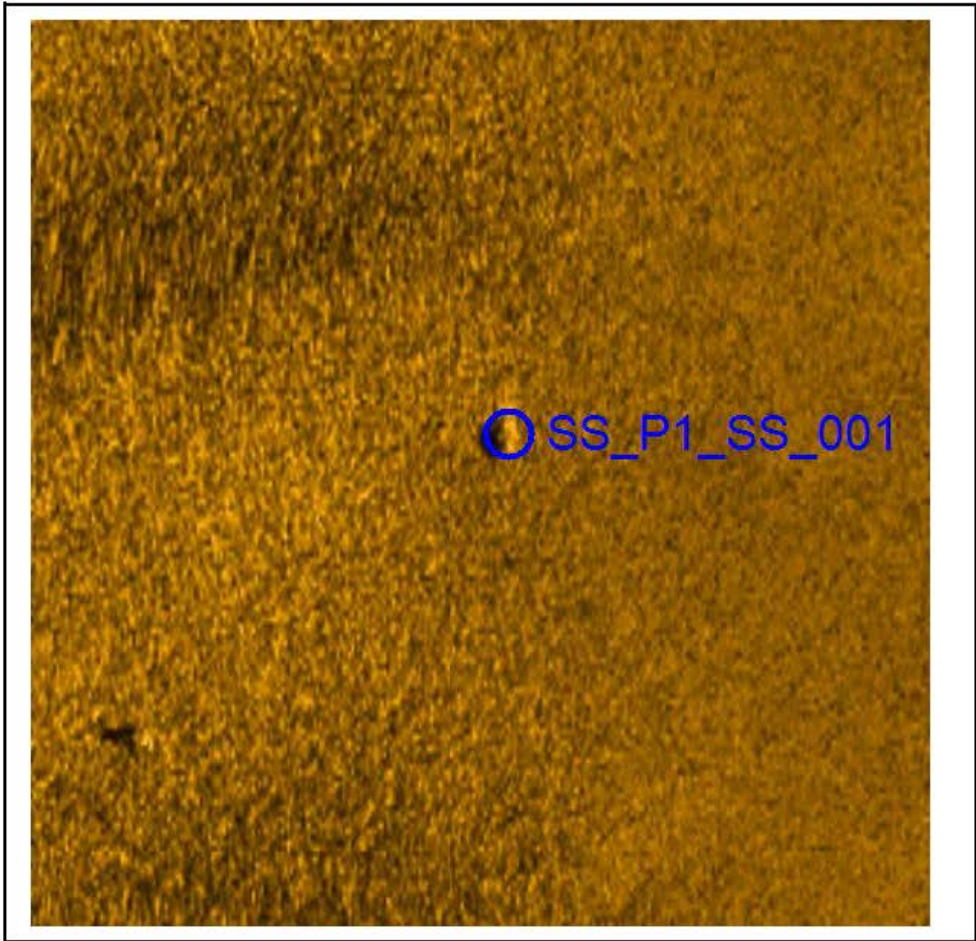


**SB\_S3\_SB\_001**

- Sonar Time at Target: 1/4/2003 5:28:32 PM
- Click Position  
29° 26.01441' N 093° 51.95382' W (WGS84)  
(X) 2474709.30 (Y) 348419.06 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 132431
- Range to target: 3.97
- Fish Height: 4.08
- Heading: 0.000 Degrees
- Event Number: 0
- Line Name: SB\_S3\_019\_N000
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



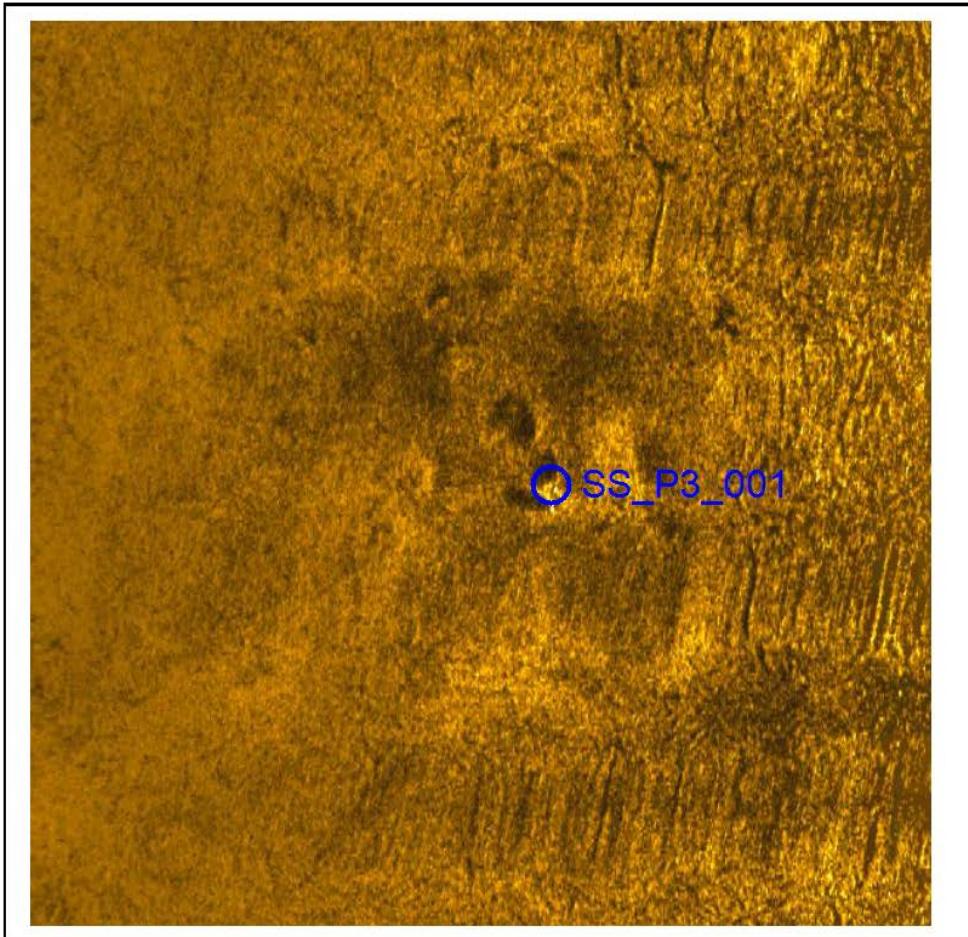
#### SS\_P1\_SS\_001

- Sonar Time at Target: 9/9/2013 10:11:34 AM
- Click Position  
28° 55.32042' N 090° 54.74020' W (WGS84)  
(X) 3415532.14 (Y) 153724.34 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 160835
- Range to target: 12.92
- Fish Height: 3.85
- Heading : 31.500 Degrees
- Event Number: 0
- Line Name: SS\_P1\_021\_N
- Water Depth: 0.00

#### Dimensions and attributes

- Target Width : 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



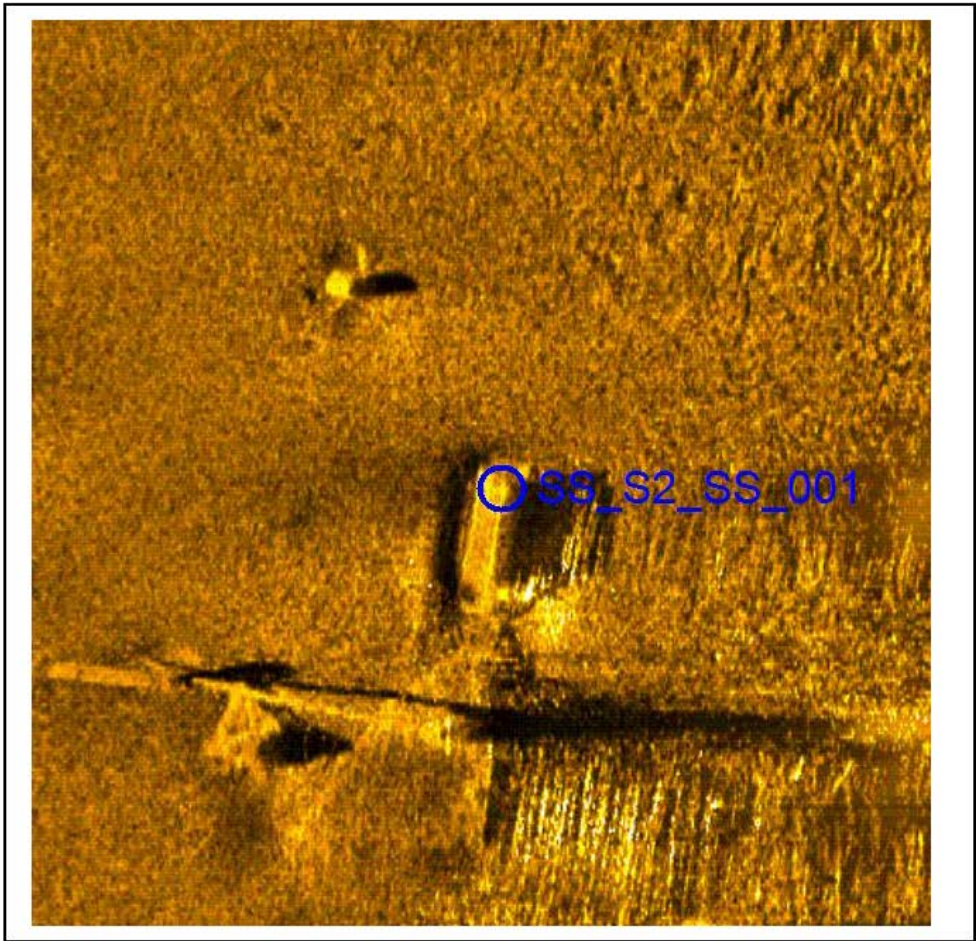


**SS\_P3\_001**

- Sonar Time at Target: 9/11/2013 12:02:14 AM
- Click Position  
28° 54.43249' N 090° 36.04109' W (WGS84)  
(X) 3515279.21 (Y) 148844.55 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 49502
- Range to target: 21.87
- Fish Height: 6.65
- Heading: 71.400 Degrees
- Event Number: 0
- Line Name: SS\_P3\_036\_NE
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



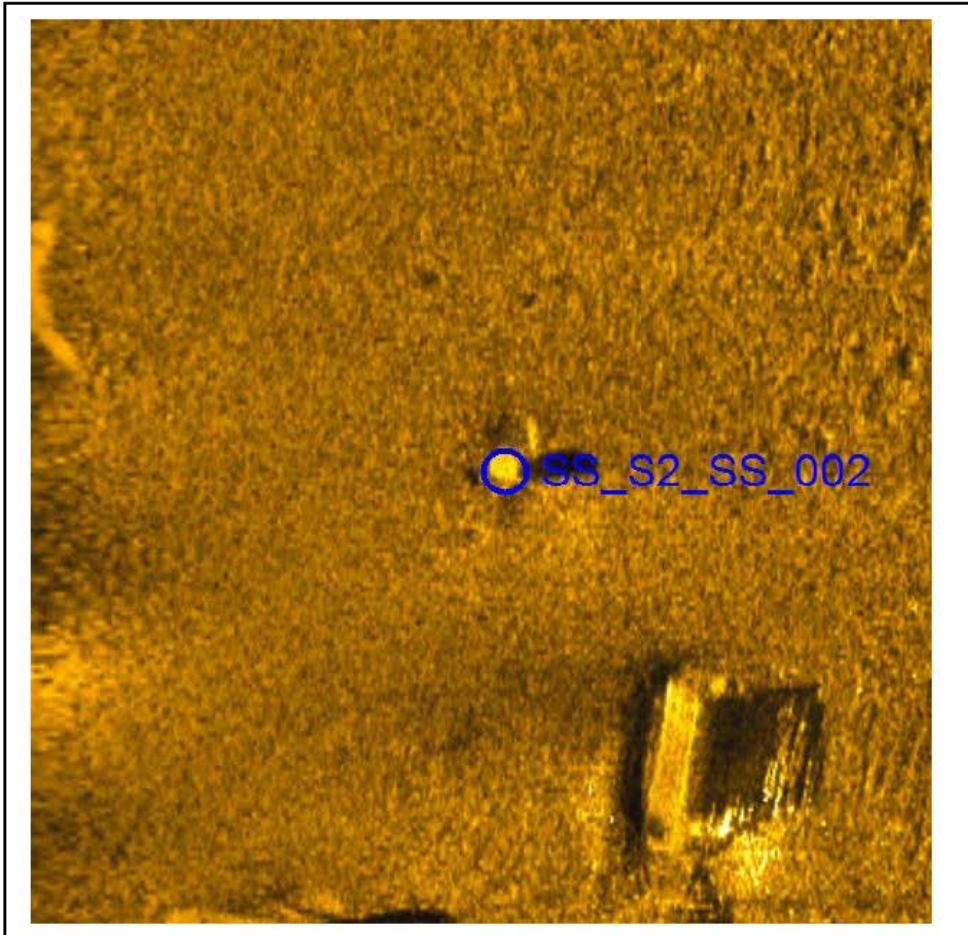
**SS\_S2\_SS\_001**

- Sonar Time at Target: 9/10/2013 3:14:43 AM
- Click Position  
28° 52.53058' N 090° 66.70251' W (WGS84)  
(X) 3405125.39 (Y) 136777.73 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 271638
- Range to target: 18.72
- Fish Height: 7.04
- Heading: 29.600 Degrees
- Event Number: 0
- Line Name: SS\_S2\_018\_N
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



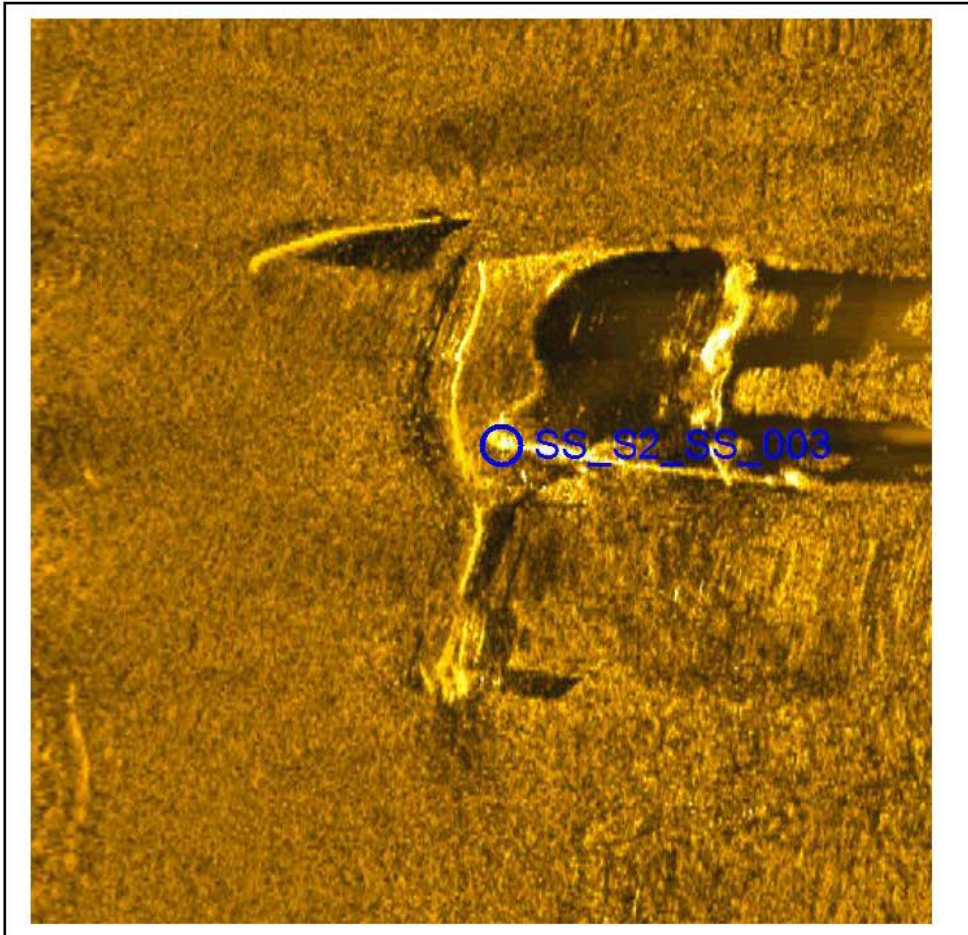


#### SS\_S2\_SS\_002

- Sonar Time at Target: 9/10/2013 3:14:40 AM
- Click Position  
28° 52.52681' N 090° 56.70587' W (WGS84)  
(X) 3405107.52 (Y) 136754.95 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 271588
- Range to target: 13.73
- Fish Height: 7.16
- Heading: 42.900 Degrees
- Event Number: 0
- Line Name: SS\_S2\_018\_N
- Water Depth: 0.00

#### Dimensions and attributes

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



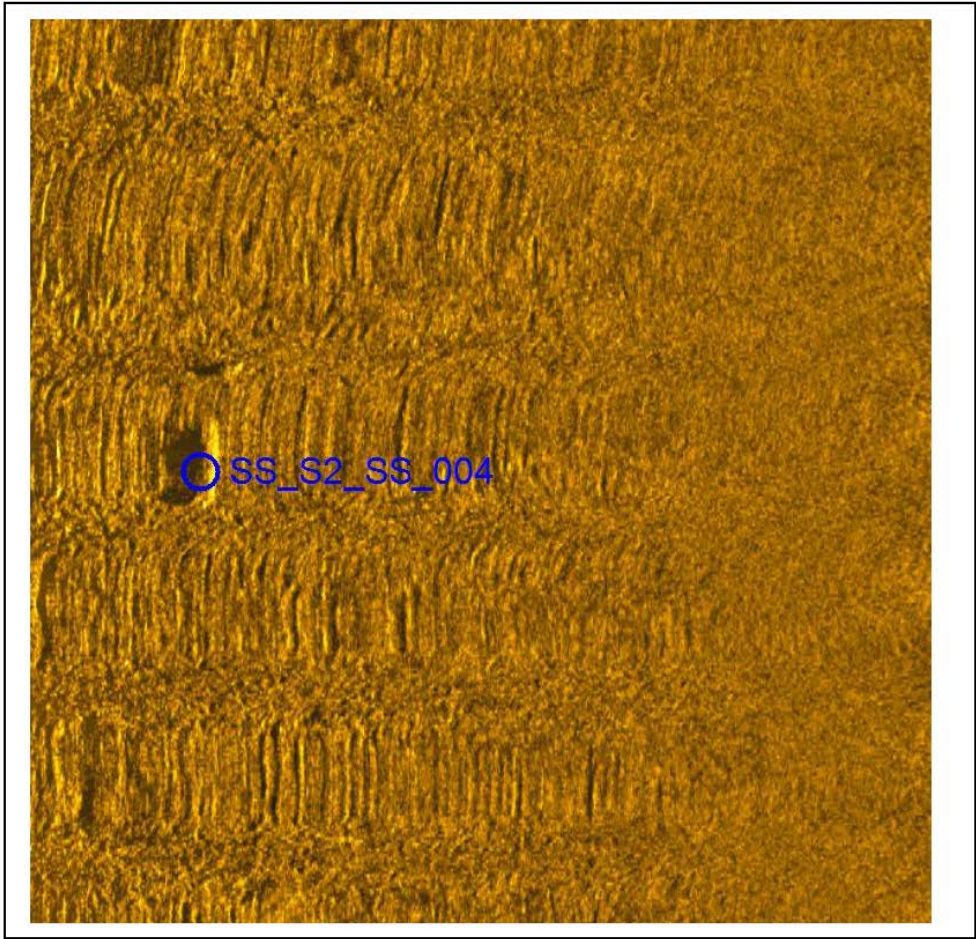
#### SS\_S2\_SS\_003

- Sonar Time at Target: 9/10/2013 4:21:38 AM
- Click Position  
28° 52.54001' N 090° 56.70286' W (WGS84)  
(X) 3405123.31 (Y) 136835.04 (Projected Coordinates)
- Map Projection: LA83-SF-MDD
- Ping Number: 343857
- Range to target: 17.18
- Fish Height: 6.50
- Heading: 139.800 Degrees
- Event Number: 0
- Line Name: SS\_S2\_016\_S
- Water Depth: 0.00

#### Dimensions and attributes

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00





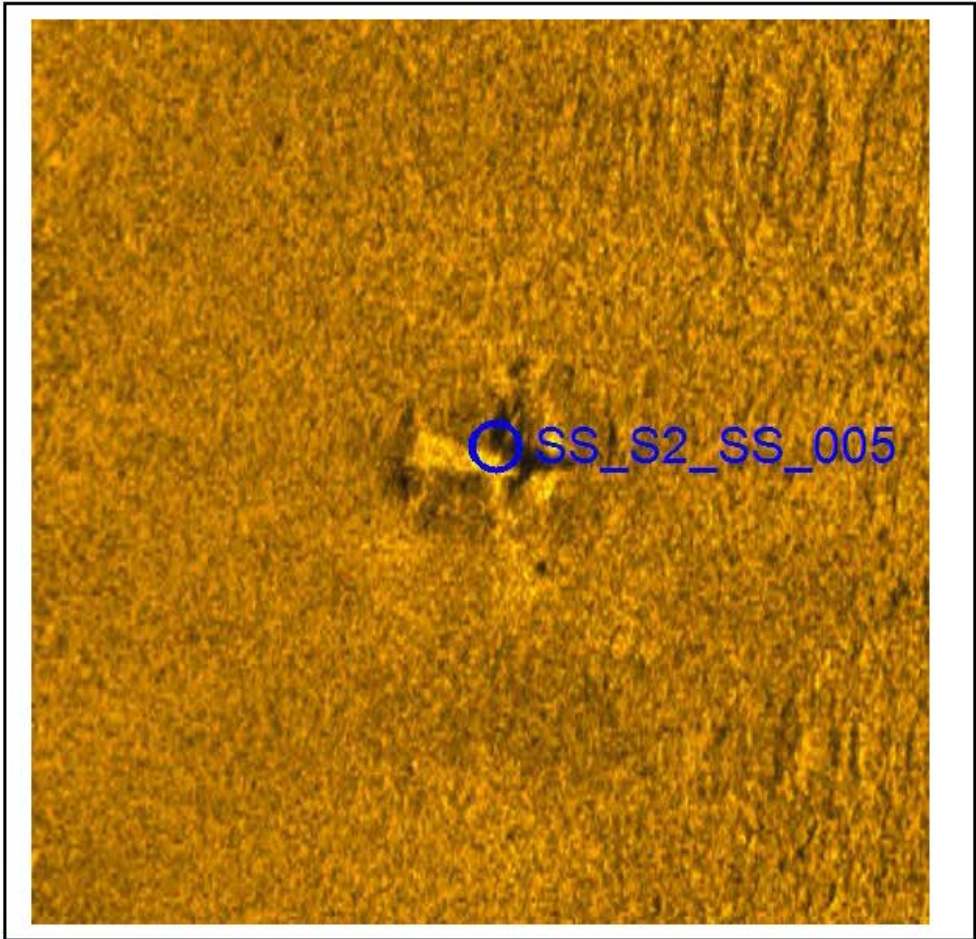
**SS\_S2\_SS\_004**

- Sonar Time at Target: 9/10/2013 5:35:21 AM
- Click Position  
28° 52.63990' N 090° 56.82115' W (WGS84)  
(X) 3404490.19 (Y) 137438.31 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 423417
- Range to target: 30.65
- Fish Height: 5.84
- Heading: 138.890 Degrees
- Event Number: 0
- Line Name: SS\_S2\_032\_S
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



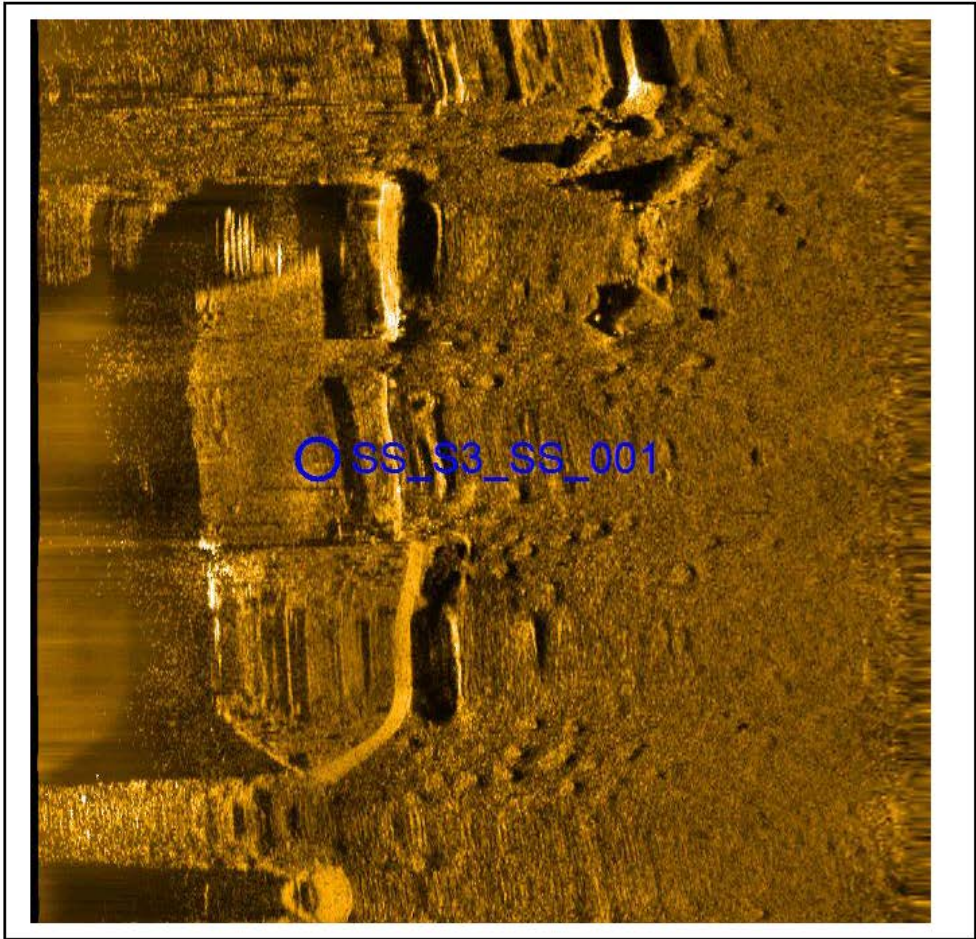


**SS\_S2\_SS\_005**

- Sonar Time at Target: 9/10/2013 6:45:23 AM
- Click Position
  - 28° 52.52548' N 090° 56.73257' W (WGS84)
  - [X] 3404985.14 [Y] 136748.27 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 488897
- Range to target: 16.95
- Fish Height: 7.24
- Heading: 239.890 Degrees
- Event Number: 0
- Line Name: SS\_S2\_101\_W
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



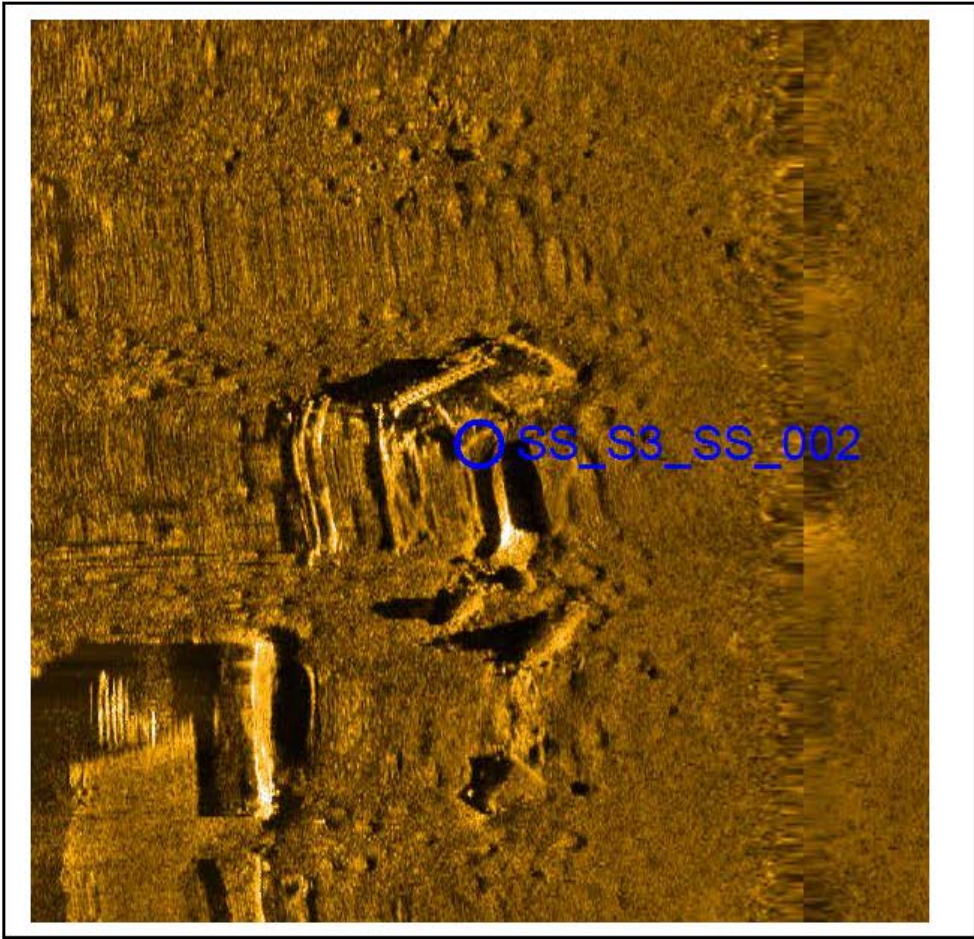
**SS\_S3\_SS\_001**

- Sonar Time at Target: 9/11/2013 9:49:04 AM
- Click Position  
28° 55.29910' N 090° 39.47652' W (WGS84)  
(X) 3496926.30 (Y) 153994.52 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 672199
- Range to target: 27.13
- Fish Height: 5.17
- Heading: 35.500 Degrees
- Event Number: 0
- Line Name: SS\_S3\_017\_N
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



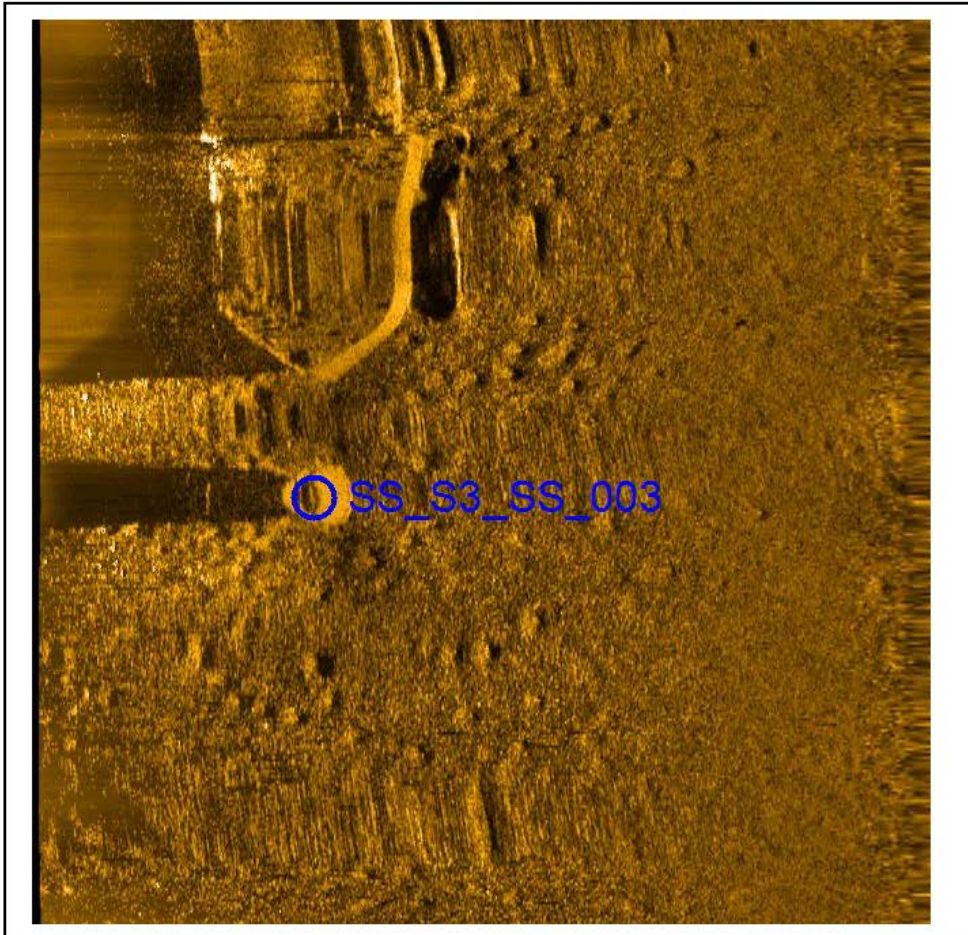


**SS\_S3\_SS\_002**

- Sonar Time at Target: 9/11/2013 9:49:54 AM
- Click Position  
29° 55.28708' N 090° 39.48975' W (WGS84)  
(X) 3496362.81 (Y) 153311.85 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 672030
- Range to target: 14.36
- Fish Height: 4.90
- Heading: 40.590 Degrees
- Event Number: 0
- Line Name: SS\_S3\_017\_N
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



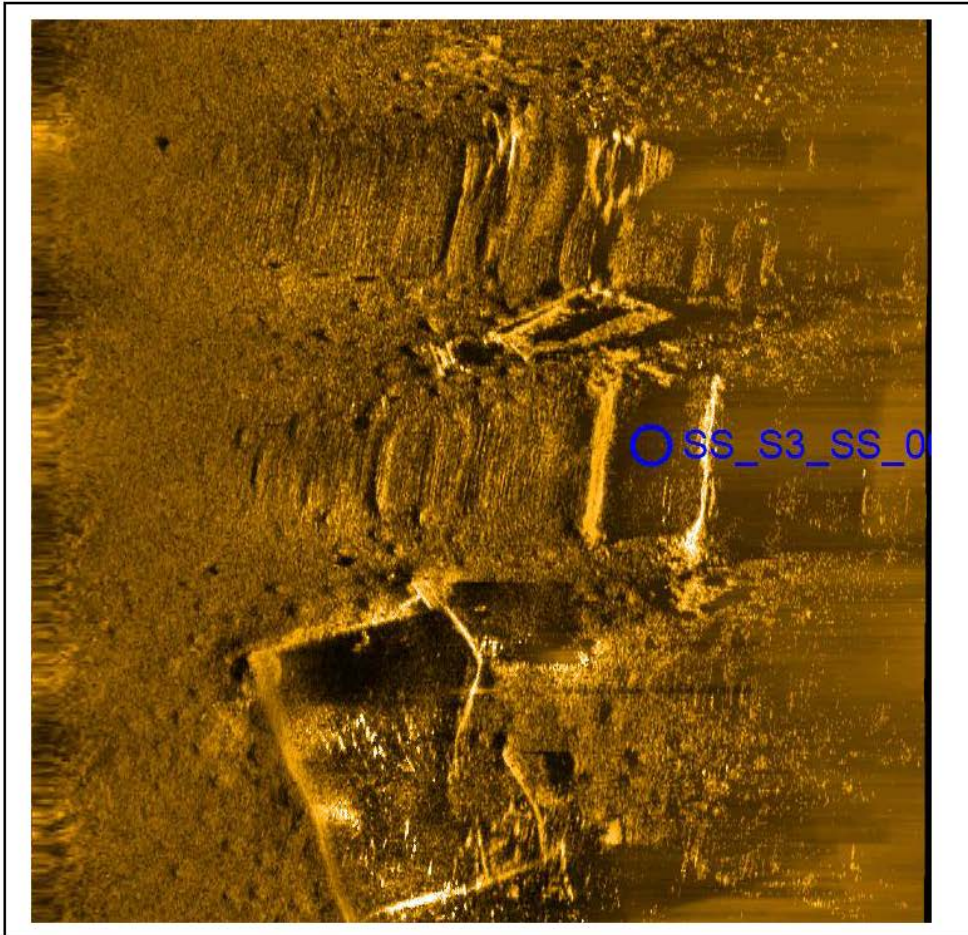
**SS\_S3\_SS\_003**

- Sonar Time at Target: 9/11/2013 9:49:13 AM
- Click Position  
28° 56.30770' N 090° 39.47602' W (WGS84)  
(X) 3496928.66 (Y) 154036.66 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 672362
- Range to target: 27.36
- Fish Height: 5.25
- Heading: 23.890 Degrees
- Event Number: 0
- Line Name: SS\_S3\_017\_N
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



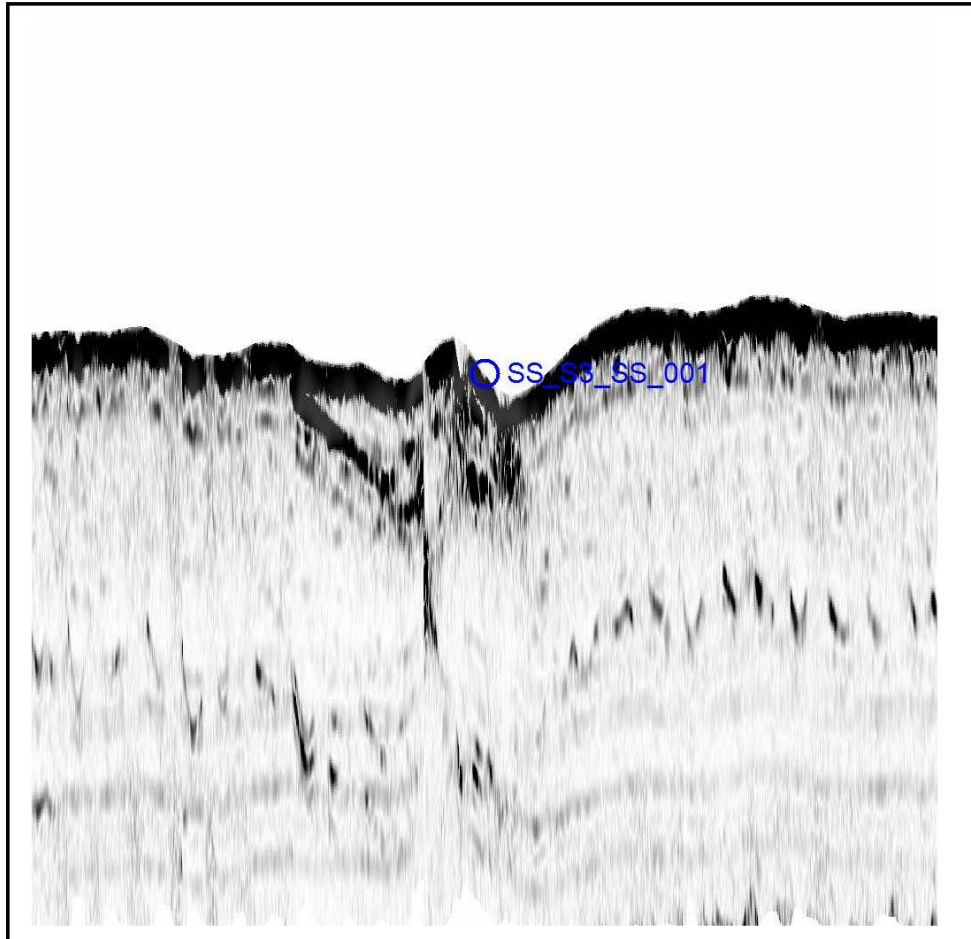


**SS\_S3\_SS\_004**

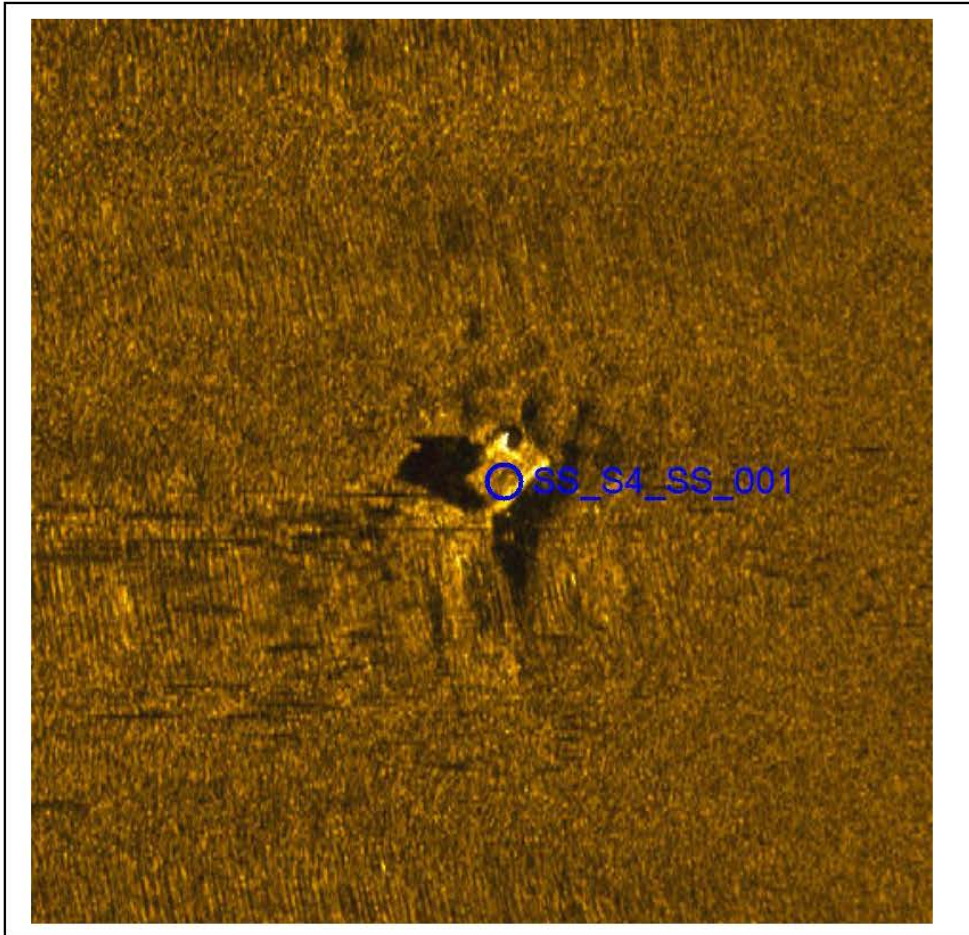
- Sonar Time at Target: 9/11/2013 9:02:29 AM
- Click Position  
28° 55.28988' N 090° 39.46907' W (WGS84)  
(X) 3496966.35 (Y) 153928.86 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 632543
- Range to target: 27.39
- Fish Height: 4.63
- Heading: 11.600 Degrees
- Event Number: 0
- Line Name: SS\_S3\_020\_N
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



<p><b>SS_S3_SS_001</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 1/8/2003 1:30:07 AM</li> <li>• Click Position 28° 55.29432' N 090° 39.47123' W (WGS84) (X) 3496954.64 (Y) 153955.68 (Projected Coordinates)</li> <li>• Map Projection: LA83-SF-MOD</li> <li>• Ping Number: 1212836</li> <li>• Range to target: 4.78</li> <li>• Fish Height: 4.98</li> <li>• Heading: 0.000 Degrees</li> <li>• Event Number: 0</li> <li>• Line Name: SS_S3_103_E000</li> <li>• Water Depth: 0.00</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00</li> <li>• Target Height: 0.00</li> <li>• Target Length: 0.00</li> <li>• Target Shadow: 0.00</li> </ul>
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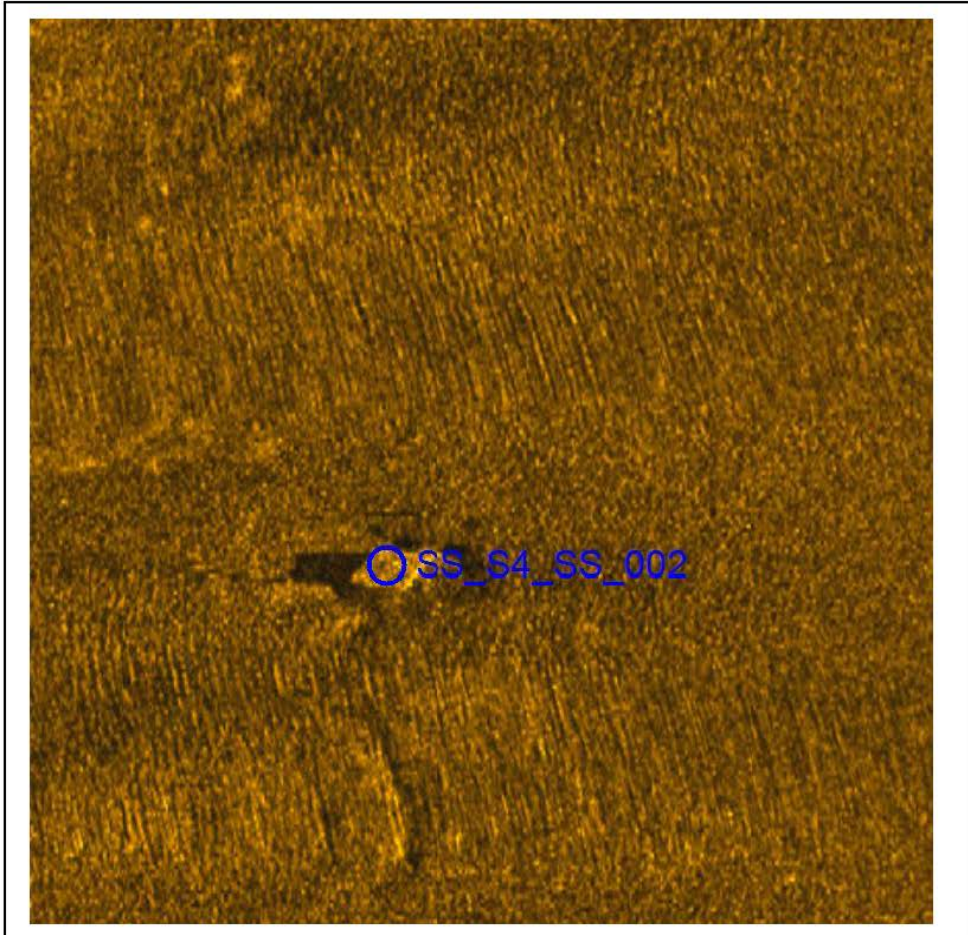
#### SS\_S4\_SS\_001

- Sonar Time at Target: 9/12/2013 12:23:27 AM
- Click Position
  - 28° 55.30557' N 090° 35.70216' W (WGS84)
  - (X) 3517052.65 (Y) 154147.87 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 67283
- Range to target: 19.48
- Fish Height: 5.16
- Heading: 33.500 Degrees
- Event Number: 0
- Line Name: SS\_S4\_023\_N
- Water Depth: 0.00

#### Dimensions and attributes

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00





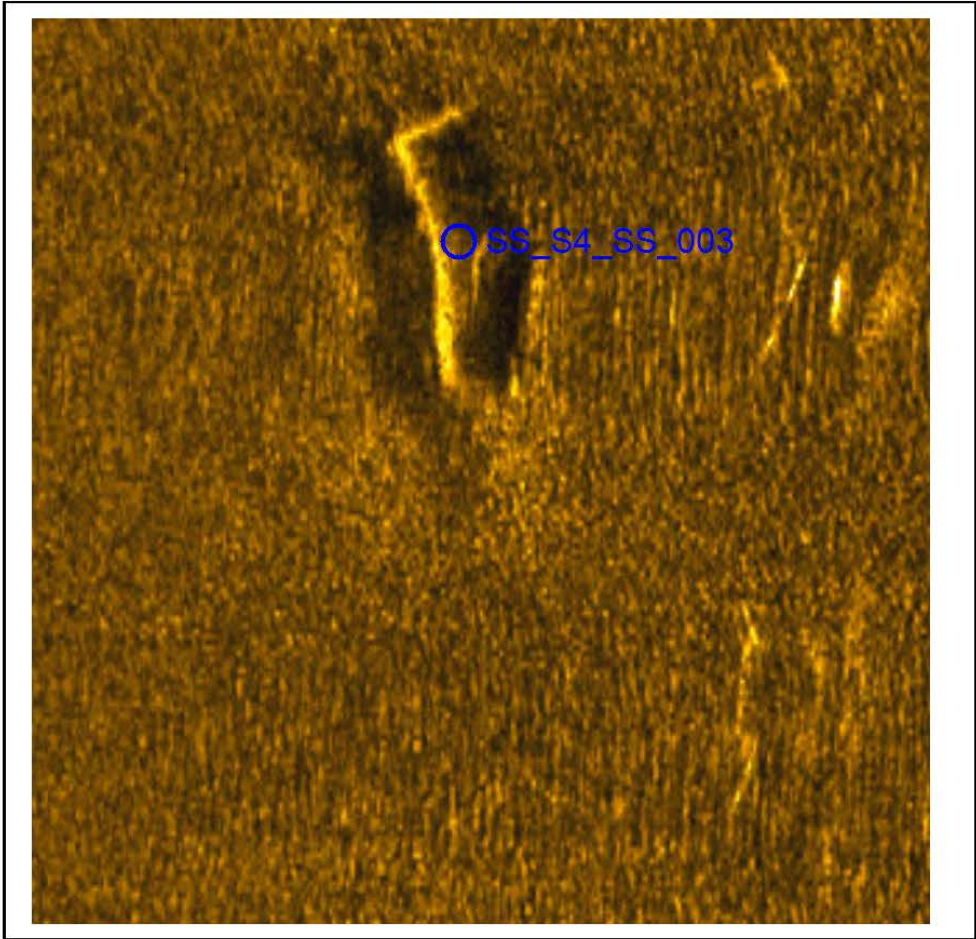
**SS\_S4\_SS\_002**

- Sonar Time at Target: 9/12/2013 12:56:56 AM
- Click Position  
28° 55' 28.849" N 090° 35' 6.8556" W (WGS84)  
(X) 3517141.85 (Y) 154044.93 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 102847
- Range to target: 23.04
- Fish Height: 4.94
- Heading: 26.000 Degrees
- Event Number: 0
- Line Name: SS\_S4\_021\_N
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



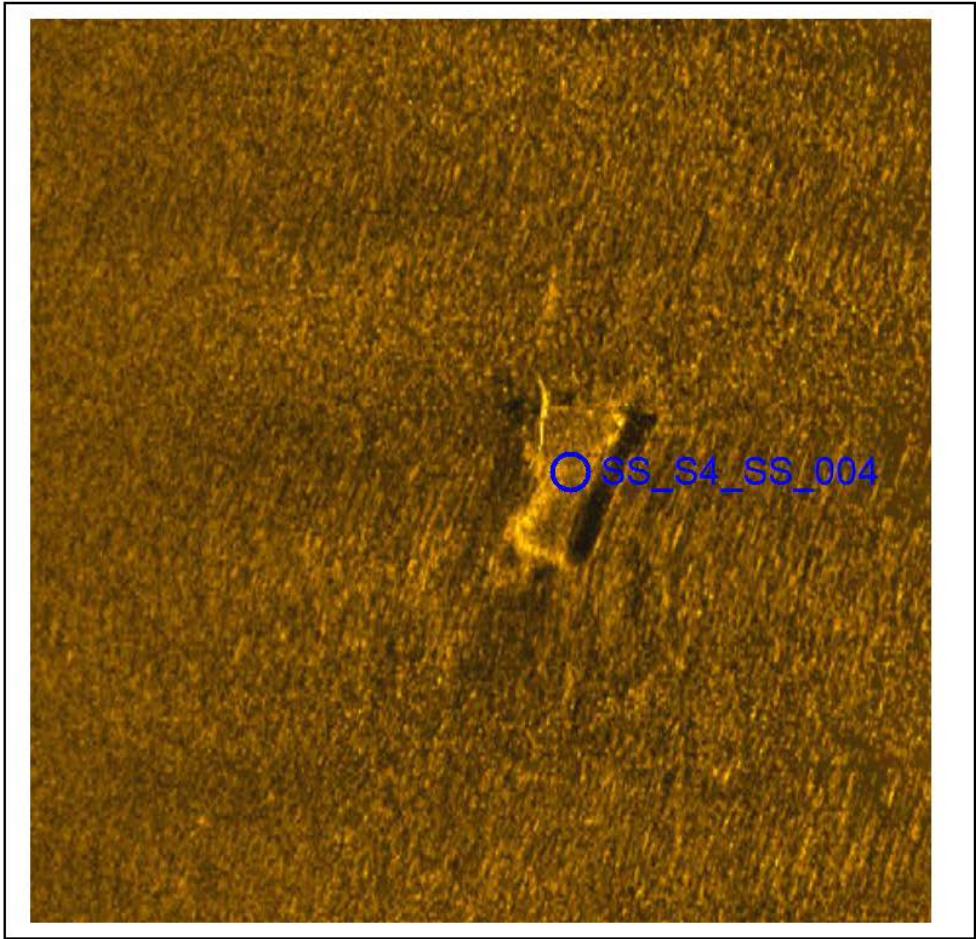


**SS\_S4\_SS\_003**

- Sonar Time at Target: 9/12/2013 2:19:48 AM
- Click Position  
28° 55.17839' N 090° 35.58138' W (WGS84)  
(X) 3517701.71 (Y) 153381.17 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 192236
- Range to target: 14.11
- Fish Height: 4.86
- Heading: 39.000 Degrees
- Event Number: 0
- Line Name: SS\_S4\_012\_N
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00

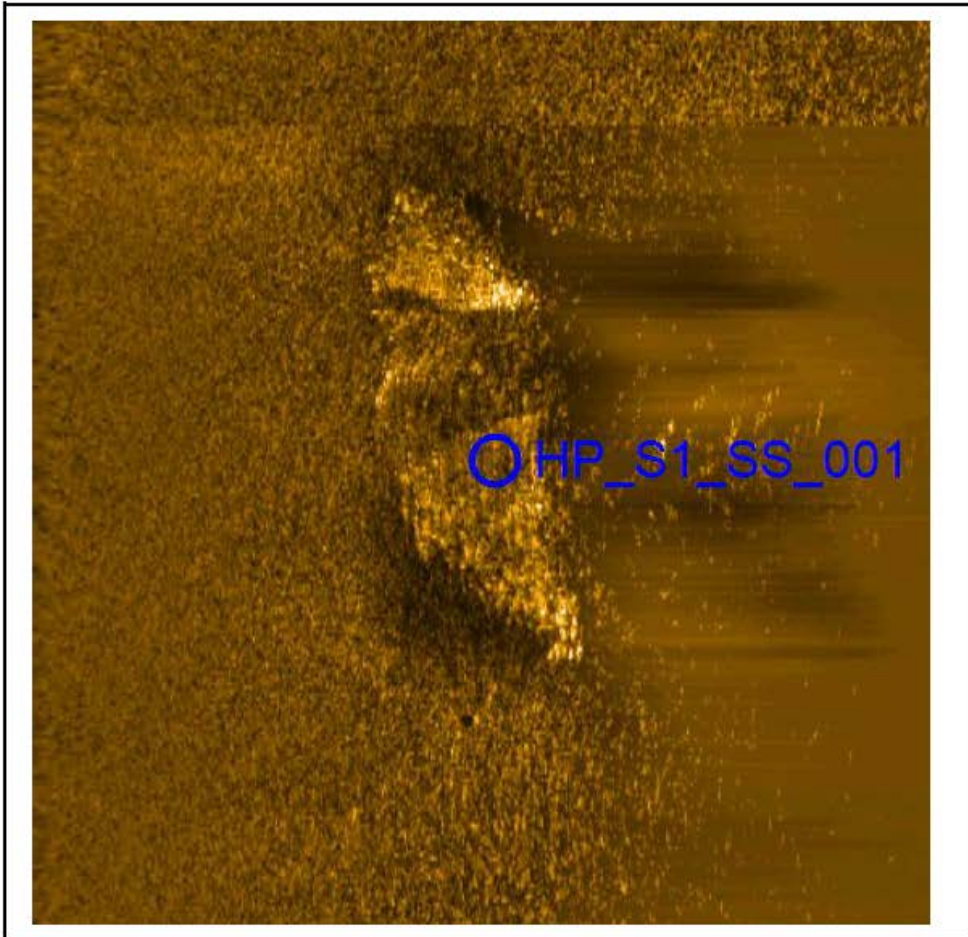


#### SS\_S4\_SS\_004

- Sonar Time at Target: 9/12/2013 3:07:22 AM
- Click Position  
28° 55.19360' N 090° 35.57538' W (WGS84)  
(X) 3517733.13 (Y) 153473.60 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 243589
- Range to target: 19.48
- Fish Height: 5.29
- Heading: 141.000 Degrees
- Event Number: 0
- Line Name: SS\_S4\_010\_S
- Water Depth: 0.00

#### Dimensions and attributes

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



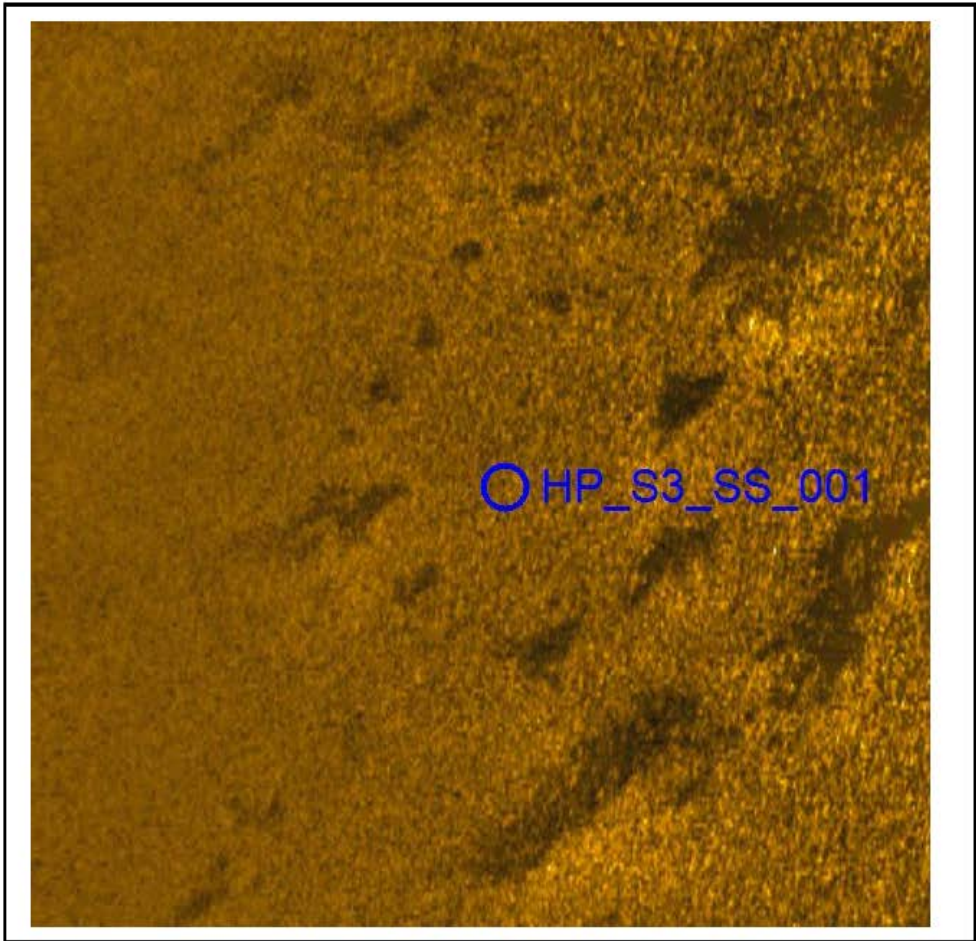
**HP\_S1\_SS\_001**

- Sonar Time at Target: 8/14/2013 2:24:34 AM
- Click Position  
30° 02.68989' N 088° 50.74805' W (WGS84)  
[X] 4067803.59 [Y] 570217.57 (Projected Coordinates)
- Map Projection: LA83-SF-MCD
- Ping Number: 169885
- Range to target: 18.13
- Fish Height: 3.77
- Heading: 130.000 Degree
- Event Number: 0
- Line Name: HP\_S1\_023\_S
- Water Depth: 2.70

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



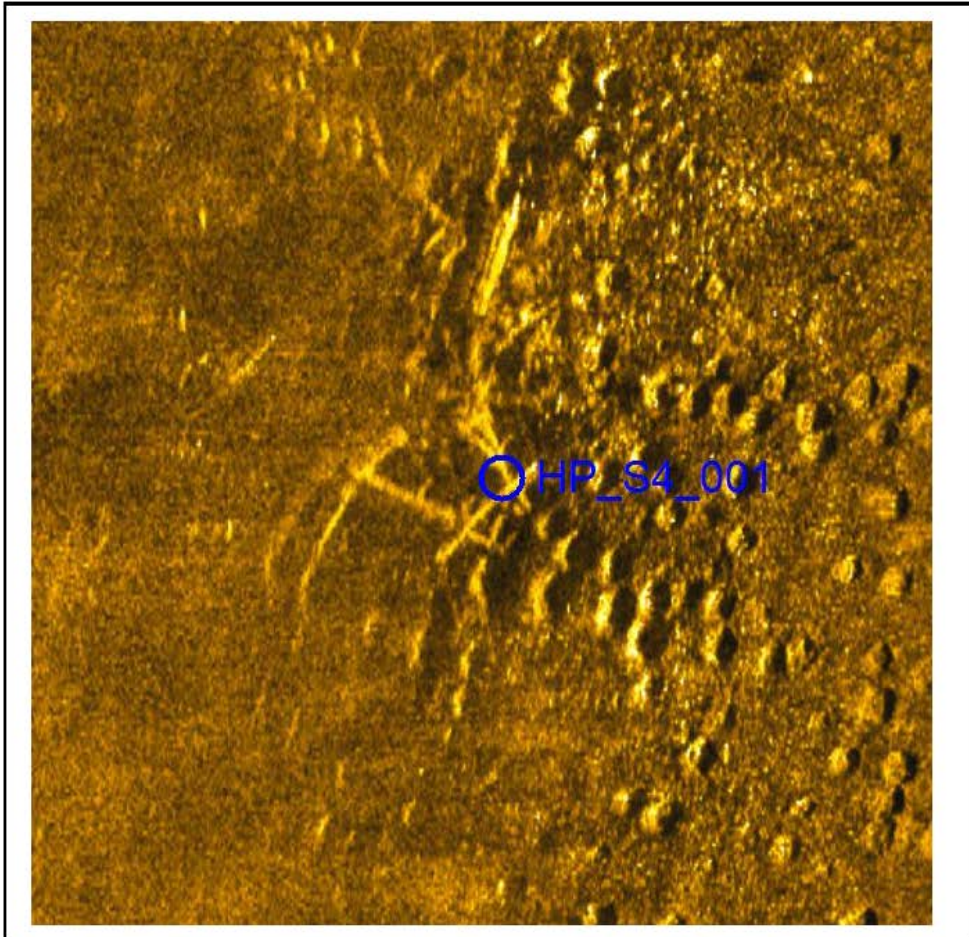


**HP\_S3\_SS\_001**

- Sonar Time at Target: 9/14/2013 12:52:39 AM
- Click Position  
30° 02.73515' N 088° 48.12770' W (WGS84)  
(X) 4081609.09 (Y) 570915.02 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 89877
- Range to target: 20.06
- Fish Height: 7.01
- Heading: 88.300 Degrees
- Event Number: 0
- Line Name: HP\_S3\_111\_E
- Water Depth: 3.86

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00

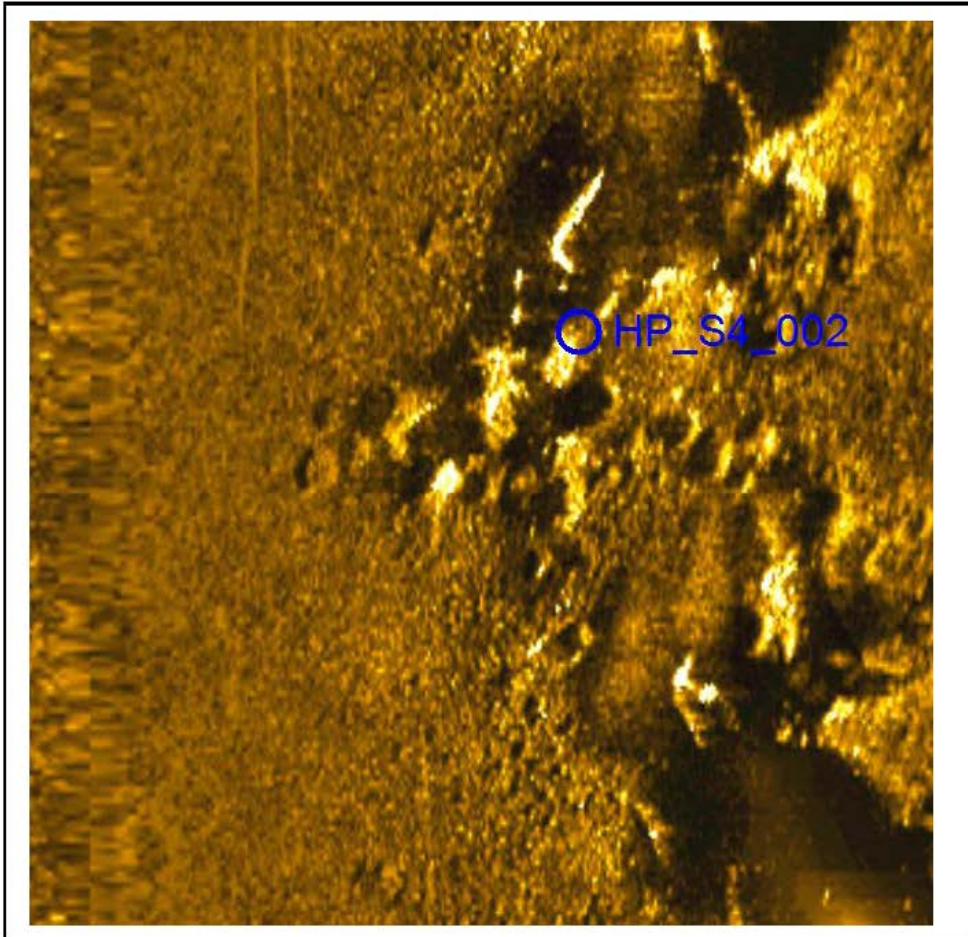


#### HP\_S4\_001

- Sonar Time at Target: 9/14/2013 1:12:58 PM
- Click Position  
30° 03.57068' N 088° 53.20943' W (WGS84)  
(X) 4054710.75 (Y) 575396.09 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 32472
- Range to target: 18.09
- Fish Height: 2.42
- Heading: 2200 Degrees
- Event Number: 0
- Line Name: HP\_S4B\_004\_NW
- Water Depth: 2.55

#### Dimensions and attributes

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



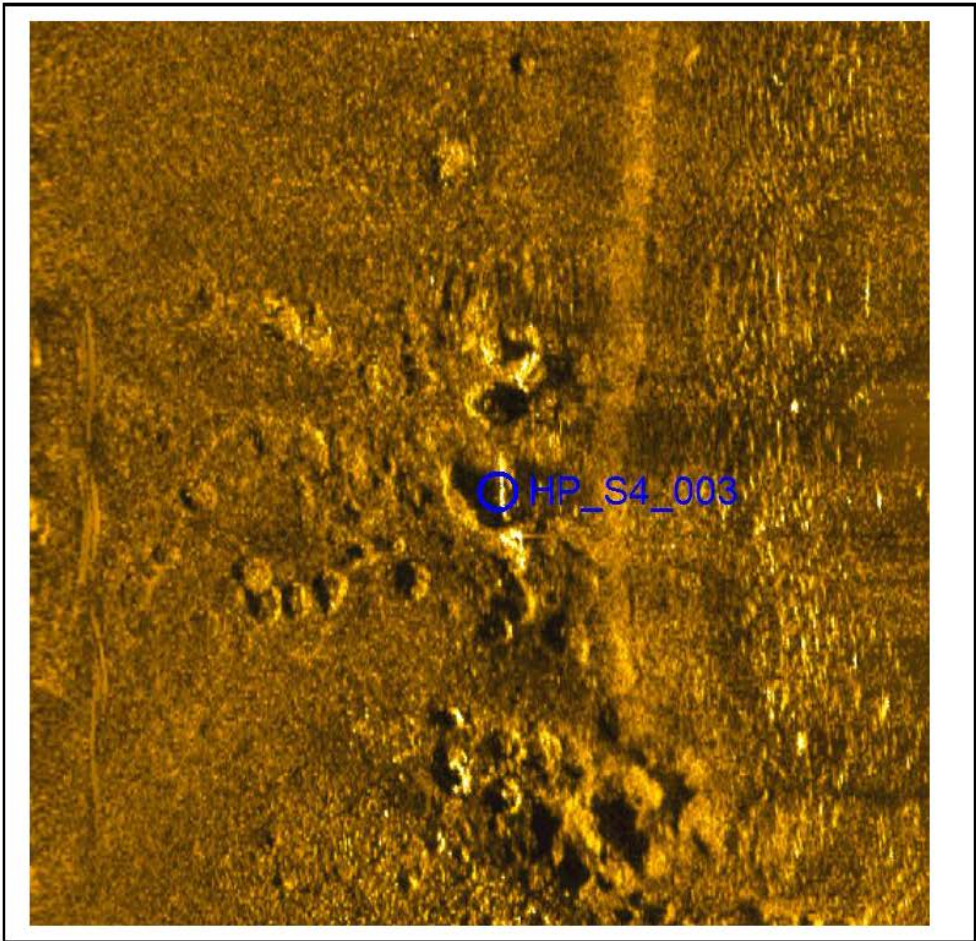
**HP\_S4\_002**

- Sonar Time at Target: 9/14/2013 11:54:40 AM
- Click Position  
30° 02.98382' N 099° 52.78505' W (WGS84)  
(X) 4057023.89 (Y) 571887.71 (Projected Coordinates)
- Map Projection: LA83-SF-MCD
- Ping Number: 7485
- Range to target: 10.54
- Fish Height: 2.15
- Heading: 356.790 Degrees
- Event Number: 0
- Line Name: HP\_S4\_011\_NW
- Water Depth: 2.91

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



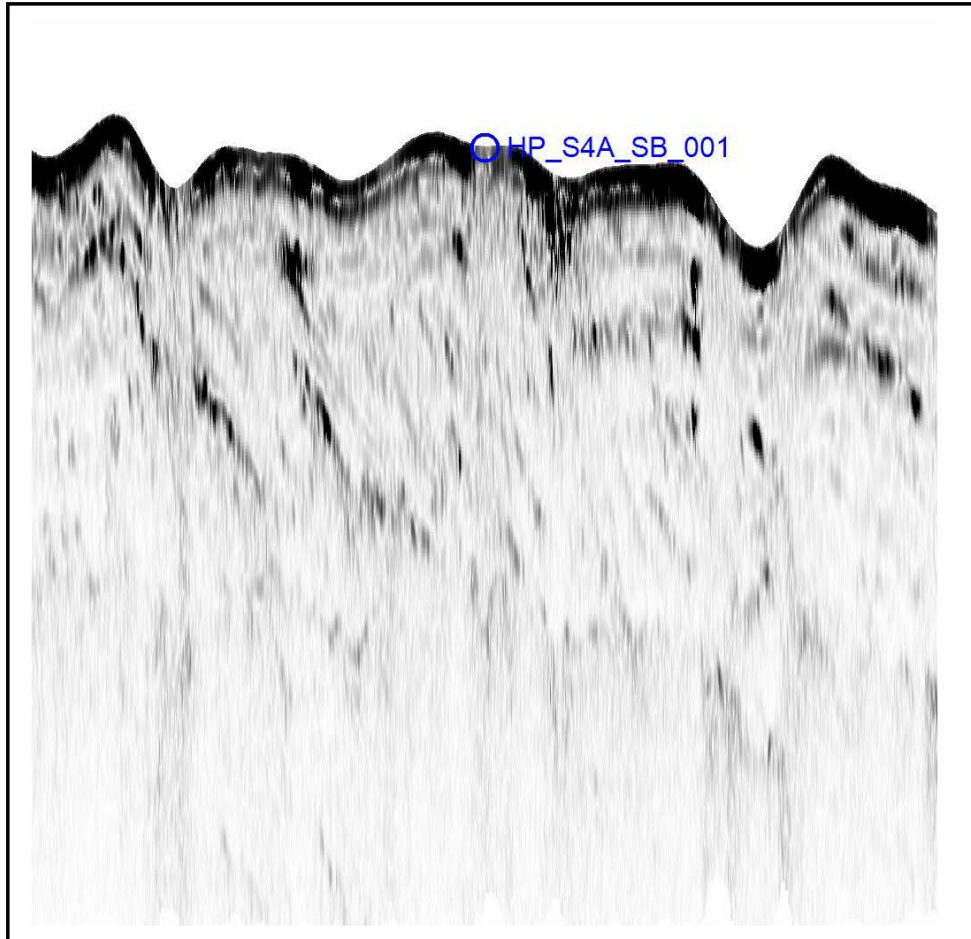


**HP\_S4\_003**

- Sonar Time at Target: 9/14/2013 12:19:00 PM
- Click Position  
30° 02.99583' N 088° 52.79127' W (WGS84)  
(X) 4056989.55 (Y) 571959.79 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 4762
- Range to target: 15.71
- Fish Height: 3.00
- Heading: 124.190 Degrees
- Event Number: 0
- Line Name: HP\_S4\_013\_SE
- Water Depth: 2.93

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



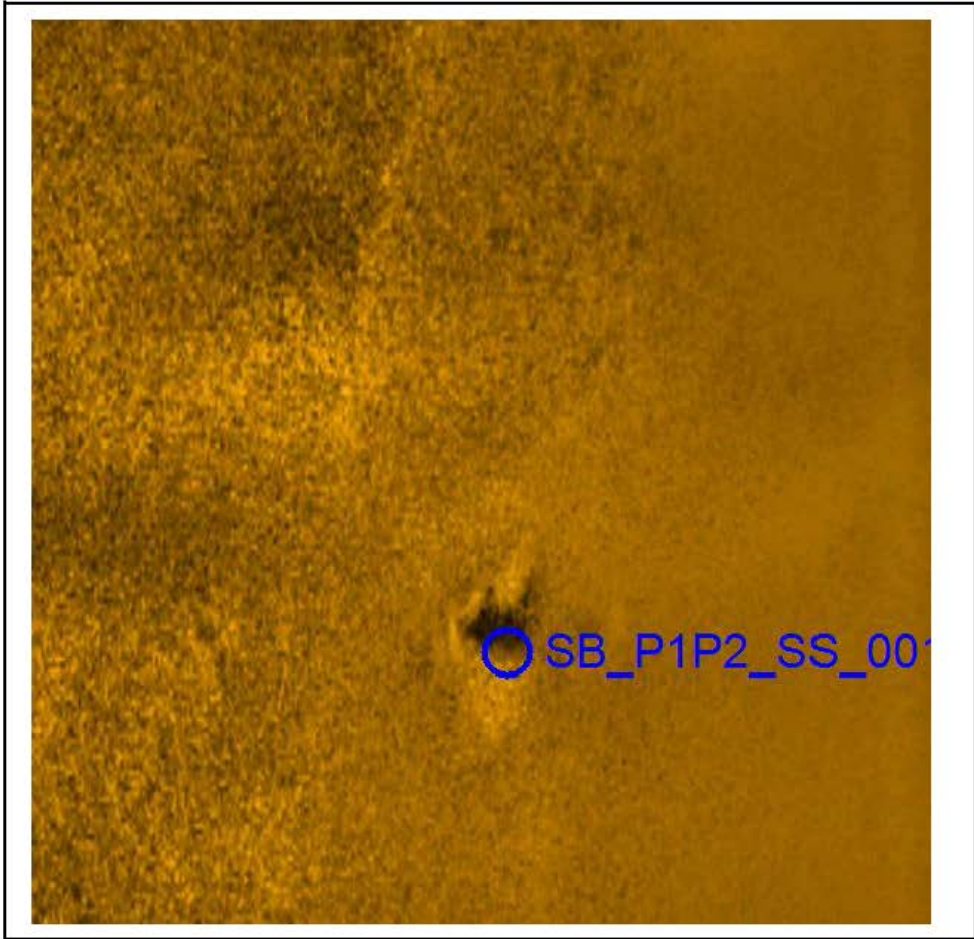
**HP\_S4A\_SB\_001**

- Sonar Time at Target: 9/14/2013 4:54:58 PM
- Click Position  
30° 02:97481' N 098° 52.77979' W (WGS84)  
(X) 4057052.80 (Y) 571833.75 (Projected Coordinates)
- Map Projection: LA83-SF-MOD
- Ping Number: 130705
- Range to target: 1.37
- Fish Height: 1.66
- Heading: 0.000 Degrees
- Event Number: 0
- Line Name: HP\_S4a\_011\_NW000
- Water Depth: 0.00

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



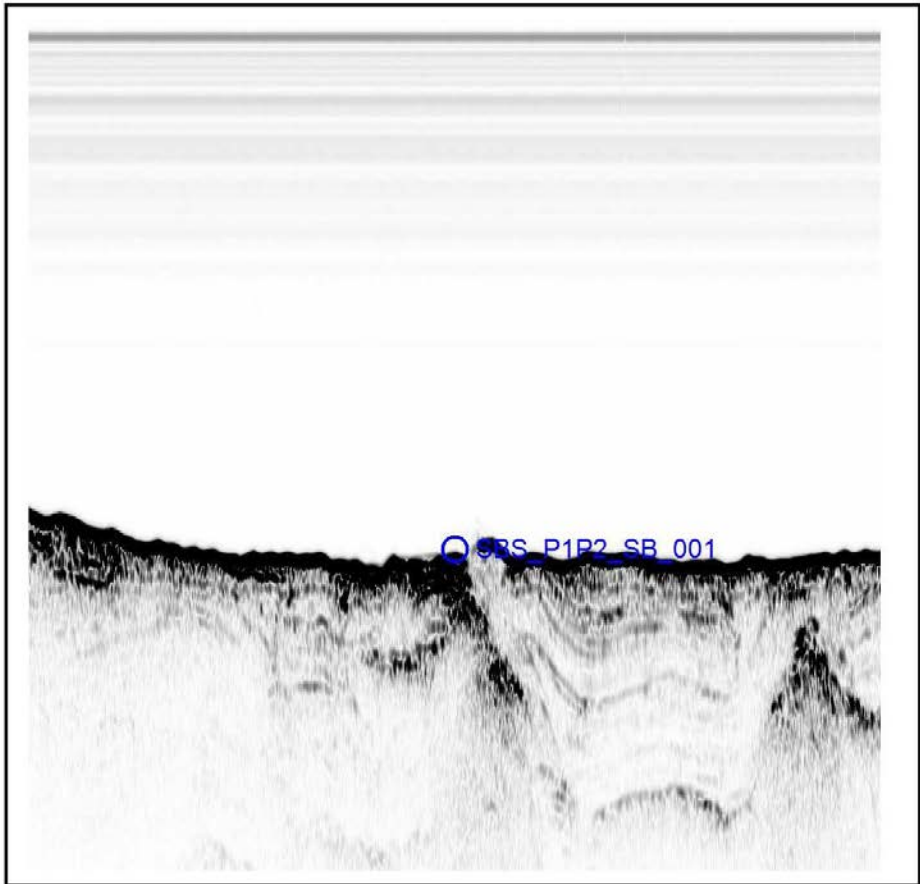


**SB\_P1P2\_SS\_001**

- Sonar Time at Target: 9/15/2013 7:20:32 AM
- Click Position  
23° 39.62804' N 099° 39.93154' W (WGS84)  
(X) 4133511.64 (Y) 425947.46 (Projected Coordinates)
- Map Projection: LA83-SF-MCD
- Ping Number: 14711
- Range to target: 15.51
- Fish Height: 10.73
- Heading: 7.500 Degrees
- Event Number: 0
- Line Name: SBS\_P1P2\_010\_N
- Water Depth: 10.08

**Dimensions and attributes**

- Target Width: 0.00
- Target Height: 0.00
- Target Length: 0.00
- Target Shadow: 0.00



<p><b>SBS_P1P2_SB_001</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 9/15/2013 12:56:23 PM</li> <li>• Click Position <ul style="list-style-type: none"> <li>29° 38.62576' N 088° 38.93000' W (WGS84)</li> <li>(X) 4133520.11 (Y) 425933.82 (Projected Coordinates)</li> </ul> </li> <li>• Map Projection: LA83-SF-MOD</li> <li>• Ping Number: 258270</li> <li>• Range to target: 15.24</li> <li>• Fish Height: 15.28</li> <li>• Heading: 0.000 Degrees</li> <li>• Event Number: 0</li> <li>• Line Name: SBS_P1P2_011_N000</li> <li>• Water Depth: 0.00</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00</li> <li>• Target Height: 0.00</li> <li>• Target Length: 0.00</li> <li>• Target Shadow: 0.00</li> </ul>
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## APPENDIX QQ: VIBRACORE LOGS

A total of sixteen vibracores are presented here. Six (6) vibracores from 2014 and ten vibracores from 2015 were collected by CB&I. Laboratory and descriptive information for each vibracore is presented on the log sheets. Unified Soils Classification System terminology is used in the core layer descriptions and key grain size information (mean grain size, fines content and sorting) for each vibracore sample is presented under the *Remarks* column. Multiple layer intervals are sometimes represented by a single sample. The *Box or Sample* column is used to identify the specific sample that represents a specific layer.

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1</b>
1. <b>PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana		9. <b>SIZE AND TYPE OF BIT</b> 3.0 In.		<b>OF 1 SHEETS</b>
2. <b>BORING DESIGNATION</b> SSVC-14-02		10. <b>COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane		<b>HORIZONTAL</b> NAD 1983
3. <b>DRILLING AGENCY</b> CB&I		11. <b>MANUFACTURER'S DESIGNATION OF DRILL</b> Diver Vibracore		<b>VERTICAL</b> NAVD 88
4. <b>NAME OF DRILLER</b> CB&I-Diver Vibracore		12. <b>TOTAL SAMPLES</b>		<input type="checkbox"/> <b>AUTO HAMMER</b> <input type="checkbox"/> <b>MANUAL HAMMER</b>
5. <b>DIRECTION OF BORING</b> <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED		13. <b>TOTAL NUMBER CORE BOXES</b>		<b>DISTURBED</b>
6. <b>THICKNESS OF OVERBURDEN</b> 0.0 Ft.		14. <b>ELEVATION GROUND WATER</b>		<b>UNDISTURBED (UD)</b>
7. <b>DEPTH DRILLED INTO ROCK</b> 0.0 Ft.		15. <b>DATE BORING</b>		<b>STARTED</b> 08-24-14 14:00
8. <b>TOTAL DEPTH OF BORING</b> 6.7 Ft.		16. <b>ELEVATION TOP OF BORING</b> -26.1 Ft.		<b>COMPLETED</b> 08-24-14 14:20
		17. <b>TOTAL RECOVERY FOR BORING</b> 5.7 Ft.		
		18. <b>SIGNATURE AND TITLE OF INSPECTOR</b> CG/LC		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-26.1	0.0					
-28.4	2.3		SAND, fine grained, quartz, some shell hash, trace shell fragments, trace silt, shell fragments up to 1.5", 3.5" pocket of shell fragments @ 1.7", dark gray (5Y-4/1), (SW).		1	Sample #1, Depth = 1.5' Mean (mm): 0.32, Phi Sorting: 1.76 Fines (230): 2.37% (SW)
-31.8	5.7		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.0", 3.0" pocket of shell hash @ 2.9', 2.0" shell fragment @ 3.0', dark gray (2.5Y-4/1), (SP-SM).		2	Sample #2, Depth = 4.0' Mean (mm): 0.18, Phi Sorting: 0.68 Fines (230): 4.81% (SP-SM)
-32.8	6.7		No Recovery.			
			End of Boring			

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

Boring Designation SSV-14-02A

<b>DRILLING LOG</b>		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.0 In.	
<b>2. BORING DESIGNATION</b> SSV-14-02A			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> CB&I			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Diver Vibracore	
<b>4. NAME OF DRILLER</b> CB&I-Diver Vibracore			<b>12. TOTAL SAMPLES</b>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b>	
<b>8. TOTAL DEPTH OF BORING</b> 8.5 Ft.			<b>16. ELEVATION TOP OF BORING</b> -26.1 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 3.5 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> CG/LC	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-26.1	0.0					
			Jetted to 5.0'.			
-31.1	5.0					
-34.6	8.5		SAND, fine grained, quartz, trace shell hash, trace silt, (0.5"x1.5") shell fragment @ 7.4', (1"x0.5") shell fragment @ 7.6', 3.0" pocket of shell fragments up to 2.5" @ 5.0', gray (5Y-5/1), (SP).		1	Sample #1, Depth = 6.8' Mean (mm): 0.18, Phi Sorting: 0.79 Fines (230): 1.23% (SP)
			End of Boring			

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
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Boring Designation SSV-14-03

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1 OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.0 In.	
<b>2. BORING DESIGNATION</b> SSV-14-03			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> CB&I			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Diver Vibracore	
<b>4. NAME OF DRILLER</b> CB&I-Diver Vibracore			<b>12. TOTAL SAMPLES</b> DISTURBED: <input type="checkbox"/> UNDISTURBED (UD): <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED: 08-21-14 14:10 COMPLETED: 08-21-14 14:30	
<b>8. TOTAL DEPTH OF BORING</b> 9.5 Ft.			<b>16. ELEVATION TOP OF BORING</b> -30.1 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 6.7 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DA/LC	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-30.1	0.0					
-32.2	2.1		SAND, fine grained, quartz, trace shell hash, trace silt, 2.0" pocket of shell hash @ 0.8', very dark gray (5Y-3/1), (SW).		1	Sample #1, Depth = 1.0' Mean (mm): 0.21, Phi Sorting: 1.08 Fines (230): 1.48% (SW)
-33.5	3.4		Shelly SAND, fine grained, quartz, shell component is shell hash and shell fragments up to 2.0", (1.75"x2.0") whole shell @ 2.3', (1.75"x1.5") whole shell @ 3.0', (1.5"x2.0") whole shell @ 2.5', dark gray (5Y-4/1), (SW).		2	Sample #2, Depth = 2.7' Mean (mm): 0.37, Phi Sorting: 1.58 Fines (230): 0.97% (SW)
-34.2	4.1				3	Sample #3, Depth = 3.7' Mean (mm): 0.19, Phi Sorting: 0.78 Fines (230): 1.33% (SP)
-35.0	4.9		SAND, fine grained, quartz, trace shell hash, trace silt, dark gray (5Y-4/1), (SP).		4	Sample #4, Depth = 4.7' Ave. Field Vane (tsf): 0.14
-36.8	6.7		Sandy CLAY, some shell fragments, little shell hash, shell fragments up to 2.0", 2.5" whole shell @ 4.5', dark gray (5Y-4/1), (SC).			
-39.6	9.5		SAND, fine grained, quartz, little shell hash, little silt, shell fragments up to 2.0", 3.0" shell fragment @ 5.1', 2.5" shell fragment @ 5.9', (1.5"x0.25") rock fragment @ 5.8', (3.0"x1.5") shell fragment @ 6.3', dark gray (5Y-4/1), (SM). No Recovery.			
			End of Boring			

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
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Boring Designation SSV-14-04

<b>DRILLING LOG</b>		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.0 In.	
<b>2. BORING DESIGNATION</b> SSV-14-04			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> CB&I			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Diver Vibracore	
<b>4. NAME OF DRILLER</b> CB&I-Diver Vibracore			<b>12. TOTAL SAMPLES</b> DISTURBED: <input type="checkbox"/> UNDISTURBED (UD): <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED: 08-22-14 17:38 COMPLETED: 08-22-14 17:53	
<b>8. TOTAL DEPTH OF BORING</b> 9.0 Ft.			<b>16. ELEVATION TOP OF BORING</b> -31.3 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 7.7 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DA/LC	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-31.3	0.0					
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, silt increases with depth, shell fragments up to 0.5", 1" pocket of shell hash @ 0.7', (2.5"x3.25") shell fragment @ 3.8', (2.0"x1.0") shell fragment @ 5.3', (1.25"x1.5") shell fragment @ 7.3', 0.75" whole shell @ 0.7', (2) 0.25" lamina of clay @ 6.0' & 7.0', dark gray (5Y-4/1), (SP).		1	Sample #1, Depth = 2.5' Mean (mm): 0.16, Phi Sorting: 0.43 Fines (230): 1.58% (SP)
					2	Sample #2, Depth = 5.0' Mean (mm): 0.15, Phi Sorting: 0.39 Fines (230): 2.17% (SP)
-39.0	7.7		No Recovery.			
-40.5	9.2		End of Boring			

LOUISIANA\_SHP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
JUN 02 JUN 04



Boring Designation SSV-14-04A

<b>DRILLING LOG</b>		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.0 In.	
<b>2. BORING DESIGNATION</b> SSV-14-04A			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> CB&I			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Diver Vibracore	
<b>4. NAME OF DRILLER</b> CB&I-Diver Vibracore			<b>12. TOTAL SAMPLES</b> DISTURBED: <input type="checkbox"/> UNDISTURBED (UD): <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED: 08-22-14 18:15 COMPLETED: 08-22-14 18:30	
<b>8. TOTAL DEPTH OF BORING</b> 13.5 Ft.			<b>16. ELEVATION TOP OF BORING</b> -31.3 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 4.7 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DA/LC	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BORING SAMPLE	REMARKS
-31.3	0.0					0
			Jetted to 8.5'			5
-39.8	8.5					
-41.3	10.0		SAND, fine grained, quartz, trace shell hash, trace silt, (2.25"x0.25") wood fragment @ 8.5', dark gray (5Y-4/1), (SP).		1	Sample #1, Depth = 9.3' Mean (mm): 0.15, Phi Sorting: 0.40 Fines (230): 1.51% (SP)
-44.5	13.2		SAND, fine grained, quartz, little silt, trace shell hash, 0.25" wood fragment @ 10.2', 1.0" clayey pockets @ 10.3', 10.9' & 11.6', (1.5"x1.0") shell fragment @ 11.4', 1.0" pocket of shell fragments @ 11.8', dark gray (5Y-4/1), (SW-SM).		2	Sample #2, Depth = 11.5' Mean (mm): 0.14, Phi Sorting: 0.86 Fines (230): 10.78% (SW-SM)
-44.8	13.5		No Recovery.			
			End of Boring			15
						20
						25

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
JUN 02 JUN 04

Boring Designation SSV-14-05

<b>DRILLING LOG</b>		DIVISION		INSTALLATION		SHEET 1 OF 1 SHEETS	
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana				<b>9. SIZE AND TYPE OF BIT</b> 3.0 In.			
<b>2. BORING DESIGNATION</b> SSV-14-05				<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane		<b>HORIZONTAL</b> NAD 1983	
<b>3. DRILLING AGENCY</b> CB&I				<b>LOCATION COORDINATES</b> X = 3,514,553 Y = 150,444		<b>VERTICAL</b> NAVD 88	
<b>4. NAME OF DRILLER</b> CB&I-Diver Vibracore				<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b>			
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED				<b>DEG. FROM VERTICAL</b>		<b>BEARING</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.				<b>12. TOTAL SAMPLES</b>			
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.				<b>13. TOTAL NUMBER CORE BOXES</b>			
<b>8. TOTAL DEPTH OF BORING</b> 4.7 Ft.				<b>14. ELEVATION GROUND WATER</b>			
				<b>15. DATE BORING</b>		<b>STARTED</b> 08-24-14 18:30	
						<b>COMPLETED</b> 08-24-14 18:48	
				<b>16. ELEVATION TOP OF BORING</b> -32.0 Ft.			
				<b>17. TOTAL RECOVERY FOR BORING</b> 4.2 Ft.			
				<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DALC			


ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-32.0	0.0					
-36.2	4.2		SAND, fine grained, quartz, trace shell hash, trace silt, 2" shell fragment @ 0.75', (2.0"x0.75") shell fragment @ 1.0', 2 (1"x0.5") shell fragments @ 1.0' & 1.9', (1.5"x1.25") shell fragment @ 2.1', (1.5"x1.0") shell fragment @ 3.9', dark gray (2.5Y-4/1), (SW).		1	Sample #1, Depth = 2.5' Mean (mm): 0.19, Phi Sorting: 0.90 Fines (230): 4.36% (SW)
-36.7	4.7		No Recovery.			
			End of Boring			

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
JUN 02 JUN 04

Boring Designation SSV-14-05A

<b>DRILLING LOG</b>		DIVISION		INSTALLATION		SHEET 1 OF 1 SHEETS	
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana				<b>9. SIZE AND TYPE OF BIT</b> 3.0 In.			
<b>2. BORING DESIGNATION</b> SSV-14-05A				<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane		<b>HORIZONTAL</b> NAD 1983	
<b>3. DRILLING AGENCY</b> CB&I				<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Diver Vibracore		<b>VERTICAL</b> NAVD 88	
<b>4. NAME OF DRILLER</b> CB&I-Diver Vibracore				<b>12. TOTAL SAMPLES</b>			
<b>5. DIRECTION OF BORING</b> <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED				<b>13. TOTAL NUMBER CORE BOXES</b>		<input type="checkbox"/> AUTO HAMMER <input type="checkbox"/> MANUAL HAMMER	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.				<b>14. ELEVATION GROUND WATER</b>			
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.				<b>15. DATE BORING</b>		<b>DISTURBED</b>	
<b>8. TOTAL DEPTH OF BORING</b> 7.4 Ft.				<b>16. ELEVATION TOP OF BORING</b> -32.0 Ft.		<b>UNDISTURBED (UD)</b>	
				<b>17. TOTAL RECOVERY FOR BORING</b> 2.9 Ft.		<b>COMPLETED</b>	
				<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> CG/LC			

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-32.0	0.0					
			Jetted to 4.0'.			
-36.0	4.0					
			SAND, fine grained, quartz, trace shell hash, trace silt, (1.5"x 1.0") shell fragment @ 4.9', (1.0"x 0.5") shell fragment @ 6.0', gray (5Y-5/1), (SP).		1	Sample #1, Depth = 5.5' Mean (mm): 0.17, Phi Sorting: 0.62 Fines (230): 1.73% (SP)
-38.9	6.9					
-39.4	7.4		No Recovery.			
			End of Boring			

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

Boring Designation SSVC-14-07

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1</b> <b>OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.0 In.	
<b>2. BORING DESIGNATION</b> SSVC-14-07			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> CB&I			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Diver Vibracore	
<b>4. NAME OF DRILLER</b> CB&I-Diver Vibracore			<b>12. TOTAL SAMPLES</b> DISTURBED: <input type="checkbox"/> UNDISTURBED (UD): <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED: 08-23-14 19:26 COMPLETED: 08-23-14 19:51	
<b>8. TOTAL DEPTH OF BORING</b> 10.8 Ft.			<b>16. ELEVATION TOP OF BORING</b> -31.1 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 10.1 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DA	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-31.1	0.0					0
-32.1	1.0		Silty SAND, fine grained, quartz, trace shell hash, very dark grayish brown (2.5Y-3/2), (SM).			
-36.4	5.3		CLAY, trace shell hash, trace silt, 1.0" pocket of silt @ 5.1'; dark gray (5Y-4/1), (CL).		1	Sample #1, Depth = 3.9' Ave. Field Vane (tsf): 0.19
-36.8	5.7		Silty CLAY, trace shell hash, (1.0"x0.25") wood fragment @ 5.5'; very dark gray (5Y-3/1), (CL).			
-38.8	7.7		CLAY, trace silt, silt distributed in lamina up to 0.5", 1.0" pocket of shell hash @ 6.3', (0.25"x3.0") pocket of organics @ 5.9', dark gray (5Y-4/1), (CL).		2	Sample #2, Depth = 6.8' Ave. Field Vane (tsf): 0.20
-40.7	9.6		CLAY, little silt, silt distributed in lamina up to 0.5", (1.25"x3.0") pocket of shell hash @ 7.8', (1.25"x3.0") pocket of silt @ 9.4', (0.25") pocket @ 8.9', light olive gray (5Y-6/2), (CL).		3	Sample #3, Depth = 9.1' Ave. Field Vane (tsf): 0.93
-41.2	10.1		Clayey SILT, dark olive gray (5Y-3/2), (ML).			
-41.9	10.8		No Recovery.			
			End of Boring			

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
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Boring Designation SSV-14-08

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1 OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.0 In.	
<b>2. BORING DESIGNATION</b> SSV-14-08			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> CB&I			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Diver Vibracore	
<b>4. NAME OF DRILLER</b> CB&I-Diver Vibracore			<b>12. TOTAL SAMPLES</b> DISTURBED: <input type="checkbox"/> UNDISTURBED (UD): <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED: 08-24-14 09:30 COMPLETED: 08-24-14 09:50	
<b>8. TOTAL DEPTH OF BORING</b> 8.2 Ft.			<b>16. ELEVATION TOP OF BORING</b> -26.5 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 6.9 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DA	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-26.5	0.0					
-27.1	0.6		SAND, medium grained, quartz, some shell hash, trace silt, 2 (1.25"x1.0") shell fragments @ 0.2' & 0.5', (1.5"x1.75") shell fragment @ 0.5', dark olive gray (5Y-3/2), (SW).		1	Sample #1, Depth = 0.3' Mean (mm): 0.45, Phi Sorting: 2.20 Fines (230): 3.27% (SW)
			SAND, fine grained, quartz, some shell hash, trace shell fragments, trace silt, (3.25"x2.5") rock fragment @ 3.1', (2.0"x1.75") shell fragment @ 1.5', (2.0"x1.25") shell fragment @ 3.7', (2.0"x1.0") shell fragment @ 5.7', dark gray (5Y-4/1), (SW-SM).		2	Sample #2, Depth = 3.2' Mean (mm): 0.25, Phi Sorting: 1.41 Fines (230): 5.70% (SW-SM)
-32.3	5.8					
-33.4	6.9		SAND, fine grained, quartz, trace shell hash, trace silt, olive gray (5Y-4/2), (SP).		3	Sample #3, Depth = 6.3' Mean (mm): 0.16, Phi Sorting: 0.49 Fines (230): 1.81% (SP)
-34.7	8.2		No Recovery.			
			End of Boring			

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
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Boring Designation SBVC-15-01

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1 OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.5 In.	
<b>2. BORING DESIGNATION</b> SBVC-15-01			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> American Vibracore Services, Inc.			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Alpine Pneumatic Vibracore	
<b>4. NAME OF DRILLER</b> Brian McCord			<b>12. TOTAL SAMPLES</b> DISTURBED <input type="checkbox"/> UNDISTURBED (UD) <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED 02-03-15 08:23 COMPLETED 02-03-15 08:24	
<b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.			<b>16. ELEVATION TOP OF BORING</b> -34.7 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 18.3 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DA	


ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-34.7	0.0					
-36.3	1.6		CLAY, trace sand, sand distributed in pockets, very dark gray (2.5Y-3/1), (CL).		T1	Sample #T1, Depth = 0.7' Ave. Field Vane (tsf): 0.13
-36.7	2.0		SILT, trace sand, trace shell fragments, very dark gray (2.5Y-3/1), (ML).		1	Sample #1, Depth = 1.8' Mean (mm): 0.15, Phi Sorting: 0.91
-37.8	3.1		SAND, fine grained, quartz, trace clay, trace shell fragments, (4.0"x1.75") pocket of clay at 2.3', dark gray (2.5Y-4/1), (SW-SC).		2	Fines (230): 76.97% (ML)
-38.7	4.0		CLAY, very dark gray (2.5Y-3/1), (CL).		T2	Sample #T2, Depth = 3.6' Ave. Field Vane (tsf): 0.06
			SAND, fine grained, quartz, trace clay, trace shell fragments, clay distributed in pockets up to 0.5", (2.5-4/1), (SW-SC).		2	Sample #2, Depth = 6.4' Mean (mm): 0.21, Phi Sorting: 1.22
-42.8	8.1					Fines (230): 4.85% (SW-SC)
			SAND, fine grained, quartz, some clay, trace shell fragments, very dark gray (2.5Y-3/1), (SC).		3	Sample #3, Depth = 9.4' Mean (mm): 0.16, Phi Sorting: 0.75
-45.4	10.7					Fines (230): 20.79% (SC)
			SAND, fine grained, quartz, some clay, trace shell fragments, very dark gray (2.5Y-3/1), (SC).			
-48.7	14.0					
			Clayey SAND, fine grained, quartz, trace shell fragments, very dark gray (2.5Y-3/1), (SC).			
-50.3	15.6					
			Sandy CLAY, trace shell fragments, (2.0"x0.75") rock at 18.2', very dark gray (2.5Y-3/1), (CL).			
-53.0	18.3					
			No Recovery.			
-54.7	20.0					
			End of Boring			

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_IPBRAZIL.GDT 11/11/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
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Boring Designation SBVC-15-02

<b>DRILLING LOG</b>		DIVISION		INSTALLATION		SHEET 1 OF 1 SHEETS	
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana						<b>9. SIZE AND TYPE OF BIT</b> 3.5 In.	
<b>2. BORING DESIGNATION</b> SBVC-15-02		<b>LOCATION COORDINATES</b> X = 2,474,673 Y = 347,706		<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane		<b>HORIZONTAL</b> NAD 1983 <b>VERTICAL</b> NAVD 88	
<b>3. DRILLING AGENCY</b> American Vibracore Services, Inc.		<b>CONTRACTOR FILE NO.</b>		<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Alpine Pneumatic Vibracore		<input type="checkbox"/> AUTO HAMMER <input type="checkbox"/> MANUAL HAMMER	
<b>4. NAME OF DRILLER</b> Brian McCord				<b>12. TOTAL SAMPLES</b>		<input type="checkbox"/> DISTURBED <input type="checkbox"/> UNDISTURBED (UD)	
<b>5. DIRECTION OF BORING</b> <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED				<b>DEG. FROM VERTICAL</b>		<b>BEARING</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.				<b>13. TOTAL NUMBER CORE BOXES</b>			
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.				<b>14. ELEVATION GROUND WATER</b>			
<b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.				<b>15. DATE BORING</b>		<b>STARTED</b> 02-03-15 09:48 <b>COMPLETED</b> 02-03-15 09:49	
				<b>16. ELEVATION TOP OF BORING</b> -30.2 Ft.		<b>17. TOTAL RECOVERY FOR BORING</b> 16.7 Ft.	
				<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> LC			

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-30.2	0.0					
			SAND, fine grained, quartz, little shell hash, little silt, trace shell fragments, shell fragments up to (1.0"x0.5"), 1.0" whole shells at 2.7" and 3.3", (2.0"x3.0") pocket of some shell hash at 1.6', dark gray (5Y-4/1), (SM).		1	Sample #1, Depth = 3.1' Mean (mm): 0.16, Phi Sorting: 0.74 Fines (230): 11.32% (SM)
-36.5	6.3					
			Sandy CLAY, trace shell hash, 0.5" whole shell at 10.3', dark gray (5Y-4/1), (CL).			
-42.4	12.2					
			Sandy CLAY, trace shell hash, sand distributed in laminae up to 0.5" with some silt, (2.0"x3.0") pocket of silty sand at 13.9', dark gray (5Y-4/1), (CL).			
-45.2	15.0					
			CLAY, some sand, trace shell hash, 2.0" shell fragment at 15.3', dark gray (5Y-4/1), (CL).		T1	Sample #T1, Depth = 15.7' Ave. Field Vane (tsf): 0.14
-46.9	16.7					
			No Recovery.			
-50.2	20.0					
			End of Boring			

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Boring Designation SBVC-15-03

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1 OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.5 In.	
<b>2. BORING DESIGNATION</b> SBVC-15-03			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> American Vibracore Services, Inc.			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Alpine Pneumatic Vibracore	
<b>4. NAME OF DRILLER</b> Brian McCord			<b>12. TOTAL SAMPLES</b> DISTURBED <input type="checkbox"/> UNDISTURBED (UD) <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> 02-01-15 13:00	
<b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.			<b>16. ELEVATION TOP OF BORING</b> -33.3 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 20.2 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DA	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-33.3	0.0					
-34.4	1.1		SAND, fine grained, quartz, trace shell hash, trace silt, dark gray (2.5Y-4/1), (SW).		1	Sample #1, Depth = 0.6' Mean (mm): 0.29, Phi Sorting: 1.45 Fines (230): 2.12% (SW) Sample #2, Depth = 1.9' Mean (mm): 0.20, Phi Sorting: 1.30 Fines (230): 16.12% (SC)
-36.0	2.7		SAND, fine grained, quartz, little clay, trace shell hash, clay distributed in clayey pockets, very dark gray (2.5Y-3/1), (SC).		2	
-39.6	6.3		Clayey SAND, fine grained, quartz, trace shell hash, (2.0"x1.0") shell fragment at 5.5', very dark gray (2.5Y-3/1), (SC).			
-43.4	10.1		CLAY, some sand, sand distributed in pockets, greenish gray (5GY-5/1), (CL).		T1	Sample #T1, Depth = 7.7' Ave. Field Vane (tsf): 0.45
-49.1	15.8		CLAY, little sand, sand distributed in pockets, light yellowish brown (2.5Y-6/4), (CL).		T2	Sample #T2, Depth = 14.7' Ave. Field Vane (tsf): 0.63
-53.5	20.2		CLAY, trace sand, sand distributed in laminae, expansion from 20.0' to 20.2', light yellowish brown (2.5Y-6/3), (CL).		T3	Sample #T3, Depth = 17.1' Ave. Field Vane (tsf): 1.00
			End of Boring			

LOUISIANA SHIP SHOAL SABINE VCS.GPJ\_JPBRAZIL.GDT 11/11/15

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Boring Designation SBVC-15-04

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1 OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.5 In.	
<b>2. BORING DESIGNATION</b> SBVC-15-04			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> American Vibracore Services, Inc.			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Alpine Pneumatic Vibracore	
<b>4. NAME OF DRILLER</b> Brian McCord			<b>12. TOTAL SAMPLES</b> DISTURBED <input type="checkbox"/> UNDISTURBED (UD) <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED 02-01-15 13:32 COMPLETED 02-01-15 13:36	
<b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.			<b>16. ELEVATION TOP OF BORING</b> -30.4 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 18.1 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> LC	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-30.4	0.0					
			SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, shell fragments up to 1.0", dark greenish gray (10Y-4/1), (SW).		1	Sample #1, Depth = 2.4' Mean (mm): 0.25, Phi Sorting: 1.22 Fines (230): 3.04% (SW)
-34.7	4.3		SAND, fine grained, quartz, some silt, trace clay, trace shell fragments, trace shell hash, clay distributed in laminae up to 0.5", shell fragments up to 0.75", (1.0"x1.25") shell fragment at 5.5", very dark greenish gray (10Y-3/1), (SM).		2	Sample #2, Depth = 6.0' Mean (mm): 0.17, Phi Sorting: 1.14 Fines (230): 35.45% (SM)
			CLAY, little sand, trace silt, sand distributed in pockets up to 2.0", sand decreases with depth, greenish gray (5GY-5/1), (CL).		T1	Sample #T1, Depth = 11.7' Ave. Field Vane (tsf): 0.36
-43.6	13.2		CLAY, light olive brown (2.5Y-5/3), (CL).		T2	Sample #T2, Depth = 14.3' Ave. Field Vane (tsf): 0.75
					T3	Sample #T3, Depth = 17.2' Ave. Field Vane (tsf): 0.75
-48.5	18.1					
-50.4	20.0		No Recovery.			
			End of Boring			

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
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Boring Designation SBVC-15-05

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1 OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.5 In.	
<b>2. BORING DESIGNATION</b> SBVC-15-05			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> American Vibracore Services, Inc.			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Alpine Pneumatic Vibracore	
<b>4. NAME OF DRILLER</b> Brian McCord			<b>12. TOTAL SAMPLES</b> DISTURBED: <input type="checkbox"/> UNDISTURBED (UD): <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED: 02-01-15 14:09 COMPLETED: 02-01-15 14:14	
<b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.			<b>16. ELEVATION TOP OF BORING</b> -34.7 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 14.8 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DA	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-34.7	0.0					
-37.3	2.6		SAND, fine grained, quartz, trace shell hash, trace silt, (1.0"x1.5") whole shell at 1.0', dark gray (2.5Y-4/1), (SW).		1	Sample #1, Depth = 1.3' Mean (mm): 0.20, Phi Sorting: 0.94 Fines (230): 3.72% (SW)
-41.5	6.8		SAND, fine grained, quartz, some clay, trace shell hash, clay distributed in clayey pockets, 1.25" shell fragment at 4.1', (1.25"x0.75") whole shell at 5.1', very dark gray (2.5Y-3/1), (SC).		2	Sample #2, Depth = 4.7' Mean (mm): 0.17, Phi Sorting: 1.12 Fines (230): 30.91% (SC)
-43.1	8.4		CLAY, some sand, sand distributed in sandy pockets, greenish gray (5GY-5/1), (CL).		T1	Sample #T1, Depth = 8.2' Ave. Field Vane (tsf): 0.44
-49.5	14.8		CLAY, trace sand, sand distributed in laminae, light olive brown (2.5Y-5/3), (CL).		T2	Sample #T2, Depth = 11.8' Ave. Field Vane (tsf): 0.10
-54.7	20.0		No Recovery.			
			End of Boring			

LOUISIANA\_SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
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Boring Designation SBVC-15-06

<b>DRILLING LOG</b>		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.5 In.	
<b>2. BORING DESIGNATION</b> SBVC-15-06			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> American Vibracore Services, Inc.			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> <input type="checkbox"/> AUTO HAMMER <input type="checkbox"/> MANUAL HAMMER	
<b>4. NAME OF DRILLER</b> Brian McCord			<b>12. TOTAL SAMPLES</b> <b>DISTURBED</b> <b>UNDISTURBED (UD)</b>	
<b>5. DIRECTION OF BORING</b> <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> <b>STARTED</b> <b>COMPLETED</b> 02-01-15 14:33    02-01-15 14:39	
<b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.			<b>16. ELEVATION TOP OF BORING</b> -30.7 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 19.9 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> LC	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-30.7	0.0					
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.0", 1.0" and 0.75" whole shells at 1.5', gray (2.5Y-5/1), (SW).		1	Sample #1, Depth = 2.0' Mean (mm): 0.25, Phi Sorting: 0.93 Fines (230): 0.98% (SW)
			Clayey SAND, fine grained, quartz, trace shell hash, clay increases with depth, 1.0" whole shell at 5.8", 0.5" whole shell at 6.0', dark gray (2.5Y-4/1), (SC).			
			Sandy CLAY, mottled color (2.5Y-5/4) and, dark greenish gray (5GY-4/1), (CL).			
			Clayey SAND, fine grained, quartz, some silt, light olive brown (2.5Y-5/3), (SC).			
			CLAY, light olive brown (2.5Y-5/3), (CL).		T1	Sample #T1, Depth = 16.4' Ave. Field Vane (tsf): 0.66
					T2	Sample #T2, Depth = 19.0' Ave. Field Vane (tsf): 1.00
-50.6	19.9		No Recovery.			
-50.7	20.0		End of Boring			

LOUISIANA SHIP SHOAL SABINE VCS.GPJ\_JPBRAZIL.GDT 11/11/15

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Boring Designation SBVC-15-07

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1 OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.5 In.	
<b>2. BORING DESIGNATION</b> SBVC-15-07			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> American Vibracore Services, Inc.			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Alpine Pneumatic Vibracore	
<b>4. NAME OF DRILLER</b> Brian McCord			<b>12. TOTAL SAMPLES</b> DISTURBED <input type="checkbox"/> UNDISTURBED (UD) <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED 02-01-15 15:18 COMPLETED 02-01-15 15:20	
<b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.			<b>16. ELEVATION TOP OF BORING</b> -26.3 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 19.9 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DA	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-26.3	0.0					
			SAND, fine grained, quartz, trace shell hash, trace silt, (3.25"x2.0") whole shell at 2.0', (3.25"x1.75") whole shell at 2.1', (2.0"x1.5") whole shell at 2.3', (2.5"x1.5") shell fragment at 4.2', dark gray (2.5Y-4/1), (SW).		1	Sample #1, Depth = 2.9' Mean (mm): 0.25, Phi Sorting: 0.94 Fines (230): 1.51% (SW)
-32.1	5.8				2	Sample #2, Depth = 6.4' Mean (mm): 0.18, Phi Sorting: 0.85 Fines (230): 5.74% (SP-SM)
-33.2	6.9		SAND, fine grained, quartz, trace shell hash, very dark gray (2.5Y-3/1), (SP-SM).		3	Sample #3, Depth = 7.2' Mean (mm): 0.20, Phi Sorting: 1.17 Fines (230): 14.45% (SC)
-33.8	7.5		SAND, fine grained, quartz, little clay, trace shell hash, very dark gray (2.5Y-3/1), (SC).		4	Sample #4, Depth = 8.9' Mean (mm): 0.21, Phi Sorting: 1.39 Fines (230): 22.77% (SC)
-36.5	10.2		SAND, fine grained, quartz, some clay, trace shell hash, clay distributed in clayey pockets, 1.25" whole shell at 9.2', very dark gray (2.5Y-3/1), (SC).			
-39.6	13.3		CLAY, some sand, trace shell hash, sand distributed in sandy pockets, very dark gray (2.5Y-3/1), (CL).		T1	Sample #T1, Depth = 11.5' Ave. Field Vane (tsf): 0.21
-41.7	15.4		CLAY, some sand, sand distributed in sandy pockets, greenish gray (5GY-6/1), (CL).		T2	Sample #T2, Depth = 14.3' Ave. Field Vane (tsf): 0.43
-46.2	19.9		CLAY, trace sand, sand distributed in sandy pockets, (3.5"x1.25") pocket of organic clast at 19.7', light yellowish brown (2.5Y-6/3), (CL).		T3	Sample #T3, Depth = 17.7' Ave. Field Vane (tsf): 0.98
-46.3	20.0		No Recovery.			
			End of Boring			

LOUISIANA SHIP SHOAL SABINE VCS.GPJ JPBRAZIL.GDT 11/11/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
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Boring Designation SBVC-15-08

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1 OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.5 In.	
<b>2. BORING DESIGNATION</b> SBVC-15-08			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> American Vibracore Services, Inc.			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Alpine Pneumatic Vibracore	
<b>4. NAME OF DRILLER</b> Brian McCord			<b>12. TOTAL SAMPLES</b> DISTURBED <input type="checkbox"/> UNDISTURBED (UD) <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED 02-01-15 15:52 COMPLETED 02-01-15 15:53	
<b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.			<b>16. ELEVATION TOP OF BORING</b> -27.6 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 19.8 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> LC	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-27.6	0.0					
-28.9	1.3		SAND, fine grained, quartz, little shell fragments, little shell hash, trace silt, shell fragments up to 0.5", (0.5"x3.0") clay pocket at 0.3', grayish brown (2.5Y-5/2), (SW).		1	Sample #1, Depth = 0.7' Mean (mm): 0.37, Phi Sorting: 1.36 Fines (230): 1.58% (SW)
-33.7	6.1		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, silt increases with depth, shell fragments up to 0.5", (2.0"x1.0") shell fragment at 2.6', dark gray (2.5Y-4/1), (SW).		2	Sample #2, Depth = 3.5' Mean (mm): 0.23, Phi Sorting: 1.02 Fines (230): 3.92% (SW)
-36.1	8.5		SAND, fine grained, quartz, some silt, trace shell fragments, trace shell hash, trace whole shell, (1.25"x0.5") whole shell at 7.8', (1.0"x1.25") whole shell at 6.8', shell fragments up to 0.5", whole shells up to 1.0", dark gray (2.5Y-4/1), (SM).		3	Sample #3, Depth = 7.5' Mean (mm): 0.19, Phi Sorting: 1.17 Fines (230): 20.53% (SM)
-40.5	12.9		Clayey SAND, fine grained, quartz, trace shell hash, clay increases with depth, shell hash distributed in pockets up to 1.0", dark gray (2.5Y-4/1), (SC).			
-43.4	15.8		CLAY, some sand, sand decreases with depth, light olive brown (2.5Y-5/3), (CL).		T1	Sample #T1, Depth = 14.2' Ave. Field Vane (tsf): 0.25
-44.5	16.9		CLAY, little silt, grayish brown (2.5Y-5/2), (CL).		T2	Sample #T2, Depth = 16.0' Ave. Field Vane (tsf): 0.39
-47.4	19.8		CLAY, grayish brown (2.5Y-5/2), (CL).		T3	Sample #T3, Depth = 19.0' Ave. Field Vane (tsf): 1.00
-47.6	20.0		No Recovery.			
			End of Boring			

LOUISIANA SHIP SHOAL SABINE VCS.GPJ\_IPBRAZIL.GDT 11/11/15

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Boring Designation SBVC-15-09

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1 OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.5 In.	
<b>2. BORING DESIGNATION</b> SBVC-15-09			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> American Vibracore Services, Inc.			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Alpine Pneumatic Vibracore	
<b>4. NAME OF DRILLER</b> Brian McCord			<b>12. TOTAL SAMPLES</b> DISTURBED <input type="checkbox"/> UNDISTURBED (UD) <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED 02-01-15 16:26 COMPLETED 02-01-15 16:29	
<b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.			<b>16. ELEVATION TOP OF BORING</b> -27.2 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 19.9 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> DA	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BORING SAMPLE	REMARKS
-27.2	0.0					
-29.0	1.8		SAND, medium grained, quartz, some shell hash, trace silt, trace whole shell, gray (2.5Y-5/1), (SW).		1	Sample #1, Depth = 0.9' Mean (mm): 0.55, Phi Sorting: 1.49 Fines (230): 1.34% (SW)
-35.2	8.0		SAND, fine grained, quartz, trace shell hash, trace silt, (3.5"x2.25") shell fragment at 5.4', dark gray (2.5Y-4/1), (SW).		2	Sample #2, Depth = 4.9' Mean (mm): 0.30, Phi Sorting: 1.18 Fines (230): 1.79% (SW)
-36.2	9.0		SAND, fine grained, quartz, trace shell hash, trace silt, very dark gray (2.5Y-3/1), (SW-SM).		3	Sample #3, Depth = 8.5' Mean (mm): 0.18, Phi Sorting: 1.00 Fines (230): 9.49% (SW-SM)
-38.3	11.1		Clayey SAND, fine grained, quartz, trace shell hash, shell fragments at 10.3' (up to 2.5"), (1.75"x0.5") shell fragment at 10.6', very dark gray (2.5Y-3/1), (SC).		T1	Sample #T1, Depth = 9.5' Ave. Field Vane (tsf): 0.23
-42.9	15.7		Sandy CLAY, trace shell hash, very dark gray (2.5Y-3/1), (CL).		T2	Sample #T2, Depth = 13.0' Ave. Field Vane (tsf): 0.15
-47.1	19.9		CLAY, trace sand, sand distributed in sandy pockets, greenish gray (10Y-5/1), (CL).		T3	Sample #T3, Depth = 18.0' Ave. Field Vane (tsf): 1.00
-47.2	20.0		No Recovery.			
			End of Boring			

LOUISIANA SHIP SHOAL SABINE VCS.GPJ\_JPBRAZIL.GDT 11/11/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
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Boring Designation SBVC-15-10

<b>DRILLING LOG</b>		<b>DIVISION</b>	<b>INSTALLATION</b>	<b>SHEET 1</b> <b>OF 1 SHEETS</b>
<b>1. PROJECT</b> BOEM Cultural Resource Investigation Ship Shoal/Sabine, Louisiana			<b>9. SIZE AND TYPE OF BIT</b> 3.5 In.	
<b>2. BORING DESIGNATION</b> SBVC-15-10			<b>10. COORDINATE SYSTEM/DATUM</b> Louisiana South State Plane	
<b>3. DRILLING AGENCY</b> American Vibracore Services, Inc.			<b>11. MANUFACTURER'S DESIGNATION OF DRILL</b> Alpine Pneumatic Vibracore	
<b>4. NAME OF DRILLER</b> Brian McCord			<b>12. TOTAL SAMPLES</b> DISTURBED <input type="checkbox"/> UNDISTURBED (UD) <input type="checkbox"/>	
<b>5. DIRECTION OF BORING</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED			<b>13. TOTAL NUMBER CORE BOXES</b>	
<b>6. THICKNESS OF OVERBURDEN</b> 0.0 Ft.			<b>14. ELEVATION GROUND WATER</b>	
<b>7. DEPTH DRILLED INTO ROCK</b> 0.0 Ft.			<b>15. DATE BORING</b> STARTED 02-01-15 17:01 COMPLETED 02-01-15 17:27	
<b>8. TOTAL DEPTH OF BORING</b> 20.0 Ft.			<b>16. ELEVATION TOP OF BORING</b> -23.9 Ft.	
			<b>17. TOTAL RECOVERY FOR BORING</b> 19.7 Ft.	
			<b>18. SIGNATURE AND TITLE OF INSPECTOR</b> LC	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-23.9	0.0					
-27.0	3.1		SAND, fine grained, quartz, some shell hash, trace shell fragments, trace silt, shell fragments up to 1.0", grayish brown (2.5Y-5/2), (SW).		1	Sample #1, Depth = 2.0' Mean (mm): 0.48, Phi Sorting: 1.53 Fines (230): 2.38% (SW)
-31.9	8.0		SAND, fine grained, quartz, trace shell hash, trace silt, 0.5" pocket of clay at 4.8', 1.0" shell fragment at 6.6', (1.0"x3.0") pocket of clay at 6.9', dark gray (2.5Y-4/1), (SW).		2	Sample #2, Depth = 5.5' Mean (mm): 0.20, Phi Sorting: 0.88 Fines (230): 2.18% (SW)
-35.7	11.8		SAND, fine grained, quartz, little silt, trace clay, trace shell hash, 1.5" shell fragment at 8.4', 2 (0.75") whole shells at 8.2', 1.0" whole shell at 9.9', 0.75" shell fragment at 10.5', dark gray (2.5Y-4/1), (SM).		3	Sample #3, Depth = 11.0' Mean (mm): 0.21, Phi Sorting: 1.38 Fines (230): 21.94% (SM)
-38.6	14.7		Sandy CLAY, trace shell hash, clay increases with depth, dark gray (2.5Y-4/1), (CL).		T1	Sample #T1, Depth = 13.5' Ave. Field Vane (tsf): 0.09
-41.1	17.2		CLAY, trace sand, grayish brown (2.5Y-5/2), (CL).		T2	Sample #T2, Depth = 15.8' Ave. Field Vane (tsf): 0.20
-43.6	19.7		CLAY, light olive brown (2.5Y-5/3), (CL).		T3	Sample #T3, Depth = 19.0' Ave. Field Vane (tsf): 1.00
-43.9	20.0		No Recovery.			
			End of Boring			

LOUISIANA SHIP SHOAL SABINE VCS.GPJ\_IPBRAZIL.GDT 11/11/15

SAJ FORM 1836 MODIFIED FOR THE FLORIDA DEP  
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## **APPENDIX RR: VIBRACORE PHOTOGRAPHS**

Photographs of the sixteen vibracores collected in 2014 and 2015 are presented in this appendix.











































































































## **APPENDIX SS: INDIVIDUAL VIBRACORE GRANULARMETRIC REPORTS**


This appendix contains individual granulometric reports for the vibracore samples collected in 2014 and 2015.

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102		
Depths and elevations based on measured values						
Project Name: BOEM Cultural Resource Investigation						
Sample Name: SSVC-14-02 #1						
Analysis Date: 11-26-14						
Analyzed By: DA						
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):
3,497,127		152,925		Louisiana South State Plane		-27.6 NAVD 88
USCS:	Munsell:	Wet - 5Y-4/1	Dry - 5Y-5/1	Washed - 5Y-7/2	Comments:	
SW						
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):
98.00	95.71	0.02	0.00	#200 - 2.49		25
				#230 - 2.37		
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	1.19	1.21	1.19	1.21
5/16	-3.00	8.00	0.94	0.96	2.13	2.17
3 1/2	-2.50	5.66	2.46	2.51	4.59	4.68
4	-2.25	4.76	0.83	0.85	5.42	5.53
5	-2.00	4.00	1.56	1.59	6.98	7.12
7	-1.50	2.83	2.31	2.36	9.29	9.48
10	-1.00	2.00	2.91	2.97	12.20	12.45
14	-0.50	1.41	2.93	2.99	15.13	15.44
18	0.00	1.00	2.70	2.76	17.83	18.20
25	0.50	0.71	2.99	3.05	20.82	21.25
35	1.00	0.50	2.15	2.19	22.97	23.44
45	1.50	0.35	2.51	2.56	25.48	26.00
60	2.00	0.25	6.84	6.98	32.32	32.98
80	2.50	0.18	18.22	18.59	50.54	51.57
120	3.00	0.13	38.39	39.17	88.93	90.74
170	3.50	0.09	6.58	6.71	95.51	97.45
200	3.75	0.07	0.06	0.06	95.57	97.51
230	4.00	0.06	0.12	0.12	95.69	97.63
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.91	2.80	2.46	1.30	-0.40	-2.41
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	1.63	0.32	1.76	-1.48	4.03	


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ JPBRZL.GDT 11/30/15

Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102		
Depths and elevations based on measured values						
Project Name: BOEM Cultural Resource Investigation						
Sample Name: SSVc-14-02 #2						
Analysis Date: 11-21-14						
Analyzed By: DA						
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):
3,497,127		152,925		Louisiana South State Plane		-30.1 NAVD 88
USCS:	Munsell:	Wet - 2.5Y-4/1	Comments:			
SP-SM		Dry - 2.5Y-5/1				
Washed - 2.5Y-7/1						
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):
96.30	91.78	0.10	0.00	#200 - 5.21		4
				#230 - 4.81		
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3 1/2	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.23	0.24	0.23	0.24
5	-2.00	4.00	0.17	0.18	0.40	0.42
7	-1.50	2.83	0.16	0.17	0.56	0.59
10	-1.00	2.00	0.29	0.30	0.85	0.89
14	-0.50	1.41	0.39	0.40	1.24	1.29
18	0.00	1.00	0.36	0.37	1.60	1.66
25	0.50	0.71	0.40	0.42	2.00	2.08
35	1.00	0.50	0.56	0.58	2.56	2.66
45	1.50	0.35	1.42	1.47	3.98	4.13
60	2.00	0.25	6.66	6.92	10.64	11.05
80	2.50	0.18	23.48	24.38	34.12	35.43
120	3.00	0.13	50.09	52.01	84.21	87.44
170	3.50	0.09	6.59	6.84	90.80	94.28
200	3.75	0.07	0.49	0.51	91.29	94.79
230	4.00	0.06	0.39	0.40	91.68	95.19
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.88	2.97	2.88	2.64	2.29	2.10	1.56
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.48	0.18	0.68	-3.4	20.49	


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SSVC-14-02A #1							
Analysis Date: 11-21-14							
Analyzed By: DA							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,497,127		152,925		Louisiana South State Plane		-32.9 NAVD 88	
USCS:		Munsell:		Comments:			
SP		Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-7/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
97.12	95.95	0.03	0.00	#200 - 1.33 #230 - 1.23		5	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16	-3.00	8.00	0.00	0.00	0.00	0.00	
3 1/2	-2.50	5.66	0.57	0.59	0.57	0.59	
4	-2.25	4.76	0.44	0.45	1.01	1.04	
5	-2.00	4.00	0.11	0.11	1.12	1.15	
7	-1.50	2.83	0.28	0.29	1.40	1.44	
10	-1.00	2.00	0.27	0.28	1.67	1.72	
14	-0.50	1.41	0.38	0.39	2.05	2.11	
18	0.00	1.00	0.23	0.24	2.28	2.35	
25	0.50	0.71	0.28	0.29	2.56	2.64	
35	1.00	0.50	0.40	0.41	2.96	3.05	
45	1.50	0.35	1.52	1.57	4.48	4.62	
60	2.00	0.25	6.10	6.28	10.58	10.90	
80	2.50	0.18	21.90	22.55	32.48	33.45	
120	3.00	0.13	57.18	58.88	89.66	92.33	
170	3.50	0.09	5.85	6.02	95.51	98.35	
200	3.75	0.07	0.31	0.32	95.82	98.67	
230	4.00	0.06	0.10	0.10	95.92	98.77	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.22	2.93	2.85	2.64	2.31	2.11	1.53	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.46	0.18	0.79	-4.14	24.31		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15


Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102		
Depths and elevations based on measured values						
Project Name: BOEM Cultural Resource Investigation						
Sample Name: SSVC-14-03 #1						
Analysis Date: 11-24-14						
Analyzed By: DA						
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):
3,496,846		154,007		Louisiana South State Plane		-31.1 NAVD 88
USCS:	Munsell:	Wet - 5Y-3/1	Comments:			
SW		Dry - 5Y-5/1				
	Washed - 5Y-6/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):
93.39	92.05	0.03	0.00	#200 - 1.53		8
				#230 - 1.48		
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	1.04	1.11	1.04	1.11
5/16	-3.00	8.00	0.00	0.00	1.04	1.11
3 1/2	-2.50	5.66	0.34	0.36	1.38	1.47
4	-2.25	4.76	0.10	0.11	1.48	1.58
5	-2.00	4.00	0.44	0.47	1.92	2.05
7	-1.50	2.83	0.60	0.64	2.52	2.69
10	-1.00	2.00	0.46	0.49	2.98	3.18
14	-0.50	1.41	0.68	0.73	3.66	3.91
18	0.00	1.00	0.75	0.80	4.41	4.71
25	0.50	0.71	0.68	0.73	5.09	5.44
35	1.00	0.50	0.73	0.78	5.82	6.22
45	1.50	0.35	1.84	1.97	7.66	8.19
60	2.00	0.25	7.13	7.63	14.79	15.82
80	2.50	0.18	26.52	28.40	41.31	44.22
120	3.00	0.13	46.72	50.03	88.03	94.25
170	3.50	0.09	3.85	4.12	91.88	98.37
200	3.75	0.07	0.09	0.10	91.97	98.47
230	4.00	0.06	0.05	0.05	92.02	98.52
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.09	2.90	2.81	2.56	2.16	2.00	0.20
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.26	0.21	1.08	-3.56	17.26	

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15


Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SSVC-14-03 #2							
Analysis Date: 11-24-14							
Analyzed By: DA							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,496,846		154,007		Louisiana South State Plane		-32.8 NAVD 88	
USCS:	Munsell:	Wet - 5Y-4/1	Dry - 5Y-5/1	Comments:			
SW		Washed - 5Y-7/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
98.20	97.25	0.01	0.00	#200 - 1.01 #230 - 0.97		25	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16	-3.50	11.31	1.13	1.15	1.13	1.15	
5/16	-3.00	8.00	0.35	0.36	1.48	1.51	
3 1/2	-2.50	5.66	1.45	1.48	2.93	2.99	
4	-2.25	4.76	1.01	1.03	3.94	4.02	
5	-2.00	4.00	1.75	1.78	5.69	5.80	
7	-1.50	2.83	2.76	2.81	8.45	8.61	
10	-1.00	2.00	2.84	2.89	11.29	11.50	
14	-0.50	1.41	3.53	3.59	14.82	15.09	
18	0.00	1.00	3.18	3.24	18.00	18.33	
25	0.50	0.71	2.48	2.53	20.48	20.86	
35	1.00	0.50	1.58	1.61	22.06	22.47	
45	1.50	0.35	7.15	7.28	29.21	29.75	
60	2.00	0.25	17.61	17.93	46.82	47.68	
80	2.50	0.18	25.49	25.96	72.31	73.64	
120	3.00	0.13	23.87	24.31	96.18	97.95	
170	3.50	0.09	0.95	0.97	97.13	98.92	
200	3.75	0.07	0.07	0.07	97.20	98.99	
230	4.00	0.06	0.04	0.04	97.24	99.03	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.94	2.71	2.53	2.04	1.17	-0.36	-2.11	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.45	0.37	1.58	-1.48	4.28		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15




Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SSVC-14-03 #3							
Analysis Date: 11-26-14							
Analyzed By: DA							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,496,846		154,007		Louisiana South State Plane		-33.8 NAVD 88	
USCS:	Munsell:	Comments:					
SP	Wet - 5Y-4/1 Dry - 5Y-5/1 Washed - 5Y-6/2						
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
93.17	91.95	0.03	0.00	#200 - 1.46 #230 - 1.33		5	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16	-3.00	8.00	0.00	0.00	0.00	0.00	
3 1/2	-2.50	5.66	0.69	0.74	0.69	0.74	
4	-2.25	4.76	0.10	0.11	0.79	0.85	
5	-2.00	4.00	0.20	0.21	0.99	1.06	
7	-1.50	2.83	0.21	0.23	1.20	1.29	
10	-1.00	2.00	0.30	0.32	1.50	1.61	
14	-0.50	1.41	0.36	0.39	1.86	2.00	
18	0.00	1.00	0.53	0.57	2.39	2.57	
25	0.50	0.71	0.47	0.50	2.86	3.07	
35	1.00	0.50	0.52	0.56	3.38	3.63	
45	1.50	0.35	1.47	1.58	4.85	5.21	
60	2.00	0.25	7.32	7.86	12.17	13.07	
80	2.50	0.18	31.12	33.40	43.29	46.47	
120	3.00	0.13	46.21	49.60	89.50	96.07	
170	3.50	0.09	2.21	2.37	91.71	98.44	
200	3.75	0.07	0.09	0.10	91.80	98.54	
230	4.00	0.06	0.12	0.13	91.92	98.67	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.99	2.88	2.79	2.54	2.18	2.04	1.43	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.36	0.19	0.78	-3.95	22.76		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SSVC-14-04 #1							
Analysis Date: 11-26-14							
Analyzed By: DA							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,509,686		149,683		Louisiana South State Plane		-33.8 NAVD 88	
USCS:	Munsell:	Wet - 5Y-4/1 Dry - 5Y-5/1 Washed - 5Y-7/1	Comments:				
SP			(1.37" x 0.75") oyster fragment weighing 5.98 g removed				
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%): #200 - 1.70 #230 - 1.58	Organics (%):	Carbonates (%):	Shell Hash (%):
90.60	89.21	0.05	0.00			2	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4	-4.25	19.03	0.00	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00	0.00
3 1/2	-2.50	5.66	0.00	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.06	0.07	0.06	0.06	0.07
7	-1.50	2.83	0.06	0.07	0.12	0.12	0.14
10	-1.00	2.00	0.00	0.00	0.12	0.12	0.14
14	-0.50	1.41	0.08	0.09	0.20	0.20	0.23
18	0.00	1.00	0.08	0.09	0.28	0.28	0.32
25	0.50	0.71	0.09	0.10	0.37	0.37	0.42
35	1.00	0.50	0.09	0.10	0.46	0.46	0.52
45	1.50	0.35	0.43	0.47	0.89	0.89	0.99
60	2.00	0.25	3.24	3.58	4.13	4.13	4.57
80	2.50	0.18	15.54	17.15	19.67	19.67	21.72
120	3.00	0.13	57.29	63.23	76.96	76.96	84.95
170	3.50	0.09	11.64	12.85	88.60	88.60	97.80
200	3.75	0.07	0.45	0.50	89.05	89.05	98.30
230	4.00	0.06	0.11	0.12	89.16	89.16	98.42
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.39	2.99	2.92	2.72	2.53	2.33	2.01	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.67	0.16	0.43	-3.05	27.92		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SSVC-14-04 #2							
Analysis Date: 11-26-14							
Analyzed By: DA							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,509,686		149,683		Louisiana South State Plane		-36.3 NAVD 88	
USCS:		Munsell:		Comments:			
SP		Wet - 5Y-4/1 Dry - 5Y-5/1 Washed - 5Y-7/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
95.76	93.79	0.10	0.00	#200 - 2.69 #230 - 2.17		2	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16	-3.00	8.00	0.00	0.00	0.00	0.00	
3 1/2	-2.50	5.66	0.04	0.04	0.04	0.04	
4	-2.25	4.76	0.00	0.00	0.04	0.04	
5	-2.00	4.00	0.02	0.02	0.06	0.06	
7	-1.50	2.83	0.02	0.02	0.08	0.08	
10	-1.00	2.00	0.02	0.02	0.10	0.10	
14	-0.50	1.41	0.03	0.03	0.13	0.13	
18	0.00	1.00	0.04	0.04	0.17	0.17	
25	0.50	0.71	0.05	0.05	0.22	0.22	
35	1.00	0.50	0.05	0.05	0.27	0.27	
45	1.50	0.35	0.17	0.18	0.44	0.45	
60	2.00	0.25	1.57	1.64	2.01	2.09	
80	2.50	0.18	13.89	14.51	15.90	16.60	
120	3.00	0.13	60.82	63.51	76.72	80.11	
170	3.50	0.09	15.38	16.06	92.10	96.17	
200	3.75	0.07	1.09	1.14	93.19	97.31	
230	4.00	0.06	0.50	0.52	93.69	97.83	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.46	3.12	2.96	2.76	2.57	2.48	2.10	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.74	0.15	0.39	-2.82	34.9		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SSVC-14-04A #1							
Analysis Date: 11-21-14							
Analyzed By: DA							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,509,686		149,683		Louisiana South State Plane		-40.6 NAVD 88	
USCS:		Munsell:		Comments:			
SP		Wet - 5Y-4/1 Dry - 5Y-5/1 Washed - 5Y-7/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
94.93	93.57	0.06	0.00	#200 - 1.87 #230 - 1.51		2	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16	-3.00	8.00	0.00	0.00	0.00	0.00	
3 1/2	-2.50	5.66	0.00	0.00	0.00	0.00	
4	-2.25	4.76	0.00	0.00	0.00	0.00	
5	-2.00	4.00	0.00	0.00	0.00	0.00	
7	-1.50	2.83	0.02	0.02	0.02	0.02	
10	-1.00	2.00	0.08	0.08	0.10	0.10	
14	-0.50	1.41	0.04	0.04	0.14	0.14	
18	0.00	1.00	0.07	0.07	0.21	0.21	
25	0.50	0.71	0.09	0.09	0.30	0.30	
35	1.00	0.50	0.14	0.15	0.44	0.45	
45	1.50	0.35	0.55	0.58	0.99	1.03	
60	2.00	0.25	2.60	2.74	3.59	3.77	
80	2.50	0.18	13.50	14.22	17.09	17.99	
120	3.00	0.13	63.18	66.55	80.27	84.54	
170	3.50	0.09	11.99	12.63	92.26	97.17	
200	3.75	0.07	0.91	0.96	93.17	98.13	
230	4.00	0.06	0.34	0.36	93.51	98.49	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.41	3.00	2.93	2.74	2.55	2.43	2.04	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.7	0.15	0.4	-2.41	21.13		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15


Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102		
Depths and elevations based on measured values						
Project Name: BOEM Cultural Resource Investigation						
Sample Name: SSV-14-04A #2						
Analysis Date: 11-26-14						
Analyzed By: DA						
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):
3,509,686		149,683		Louisiana South State Plane		-42.8 NAVD 88
USCS:	Munsell:	Wet - 5Y-4/1 Dry - 5Y-5/1 Washed - 5Y-6/1	Comments:			
SW-SM			(1.75" x 1.0") oyster fragment weighing 4.90 g removed			
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):
88.80	79.46	0.25	0.00	#200 - 11.86 #230 - 10.78		5
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.95	1.07	0.95	1.07
3 1/2	-2.50	5.66	0.00	0.00	0.95	1.07
4	-2.25	4.76	0.00	0.00	0.95	1.07
5	-2.00	4.00	0.14	0.16	1.09	1.23
7	-1.50	2.83	0.17	0.19	1.26	1.42
10	-1.00	2.00	0.13	0.15	1.39	1.57
14	-0.50	1.41	0.14	0.16	1.53	1.73
18	0.00	1.00	0.06	0.07	1.59	1.80
25	0.50	0.71	0.07	0.08	1.66	1.88
35	1.00	0.50	0.07	0.08	1.73	1.96
45	1.50	0.35	0.13	0.15	1.86	2.11
60	2.00	0.25	0.45	0.51	2.31	2.62
80	2.50	0.18	2.98	3.36	5.29	5.98
120	3.00	0.13	37.92	42.70	43.21	48.68
170	3.50	0.09	32.09	36.14	75.30	84.82
200	3.75	0.07	2.95	3.32	78.25	88.14
230	4.00	0.06	0.96	1.08	79.21	89.22
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.49	3.36	3.02	2.72	2.62	2.35
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.86	0.14	0.86	-5.4	36.87	

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15


Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SSVC-14-05 #1							
Analysis Date: 11-24-14							
Analyzed By: DA							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,514,553		150,444		Louisiana South State Plane		-34.5 NAVD 88	
USCS:		Munsell:		Comments:			
SW		Wet - 2.5Y-4/1 Dry - 2.5Y-5/1 Washed - 2.5Y-6/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
95.35	91.24	0.03	0.00	#200 - 4.43 #230 - 4.36		5	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16	-3.00	8.00	1.46	1.53	1.46	1.53	
3 1/2	-2.50	5.66	0.00	0.00	1.46	1.53	
4	-2.25	4.76	0.08	0.08	1.54	1.61	
5	-2.00	4.00	0.01	0.01	1.55	1.62	
7	-1.50	2.83	0.11	0.12	1.66	1.74	
10	-1.00	2.00	0.30	0.31	1.96	2.05	
14	-0.50	1.41	0.28	0.29	2.24	2.34	
18	0.00	1.00	0.22	0.23	2.46	2.57	
25	0.50	0.71	0.23	0.24	2.69	2.81	
35	1.00	0.50	0.29	0.30	2.98	3.11	
45	1.50	0.35	0.81	0.85	3.79	3.96	
60	2.00	0.25	6.18	6.48	9.97	10.44	
80	2.50	0.18	26.02	27.29	35.99	37.73	
120	3.00	0.13	50.98	53.47	86.97	91.20	
170	3.50	0.09	3.93	4.12	90.90	95.32	
200	3.75	0.07	0.24	0.25	91.14	95.57	
230	4.00	0.06	0.07	0.07	91.21	95.64	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.46	2.93	2.85	2.61	2.27	2.10	1.58	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.4	0.19	0.9	-4.59	27.43		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15




Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SSVC-14-05A #1							
Analysis Date: 11-26-14							
Analyzed By: DA							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,514,553		150,444		Louisiana South State Plane		-37.5 NAVD 88	
USCS:	Munsell:	Wet - 5Y-5/1 Dry - 5Y-5/1 Washed - 5Y-6/2	Comments:				
SP							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
99.43	97.77	0.05	0.00	#200 - 1.89 #230 - 1.73		3	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
19.00	-4.25	19.03	0.00	0.00	0.00	0.00	
16.00	-4.00	16.00	0.00	0.00	0.00	0.00	
11.20	-3.50	11.31	0.00	0.00	0.00	0.00	
8.00	-3.00	8.00	0.07	0.07	0.07	0.07	
5.60	-2.50	5.66	0.15	0.15	0.22	0.22	
4.75	-2.25	4.76	0.20	0.20	0.42	0.42	
4.00	-2.00	4.00	0.02	0.02	0.44	0.44	
2.80	-1.50	2.83	0.16	0.16	0.60	0.60	
2.00	-1.00	2.00	0.18	0.18	0.78	0.78	
1.40	-0.50	1.41	0.21	0.21	0.99	0.99	
1.00	0.00	1.00	0.17	0.17	1.16	1.16	
0.71	0.50	0.71	0.18	0.18	1.34	1.34	
0.50	1.00	0.50	0.21	0.21	1.55	1.55	
0.36	1.50	0.35	0.85	0.85	2.40	2.40	
0.25	2.00	0.25	6.65	6.69	9.05	9.09	
0.18	2.50	0.18	25.83	25.98	34.88	35.07	
0.13	3.00	0.13	55.26	55.58	90.14	90.65	
0.09	3.50	0.09	6.98	7.02	97.12	97.67	
0.08	3.75	0.07	0.44	0.44	97.56	98.11	
0.06	4.00	0.06	0.16	0.16	97.72	98.27	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.31	2.94	2.86	2.63	2.31	2.13	1.69	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.52	0.17	0.62	-4.3	32.47		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102		
Depths and elevations based on measured values						
Project Name: BOEM Cultural Resource Investigation						
Sample Name: SSV-14-08 #1						
Analysis Date: 11-26-14						
Analyzed By: DA						
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):
3,497,575		153,189		Louisiana South State Plane		-26.8 NAVD 88
USCS:	Munsell:	Wet - 5Y-3/2 Dry - 5Y-5/2 Washed - 5Y-7/2	Comments:			
SW			(1.32" x 1.19") whole clam weighing 5.19 g removed			
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):
94.42	91.41	0.07	0.00	#200 - 3.48 #230 - 3.27		31
Shell Hash (%):						
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	4.41	4.67	4.41	4.67
5/16	-3.00	8.00	2.36	2.50	6.77	7.17
3 1/2	-2.50	5.66	3.28	3.47	10.05	10.64
4	-2.25	4.76	2.11	2.23	12.16	12.87
5	-2.00	4.00	1.92	2.03	14.08	14.90
7	-1.50	2.83	2.98	3.16	17.06	18.06
10	-1.00	2.00	3.44	3.64	20.50	21.70
14	-0.50	1.41	3.05	3.23	23.55	24.93
18	0.00	1.00	2.38	2.52	25.93	27.45
25	0.50	0.71	1.65	1.75	27.58	29.20
35	1.00	0.50	1.27	1.35	28.85	30.55
45	1.50	0.35	2.20	2.33	31.05	32.88
60	2.00	0.25	5.78	6.12	36.83	39.00
80	2.50	0.18	15.99	16.93	52.82	55.93
120	3.00	0.13	33.42	35.40	86.24	91.33
170	3.50	0.09	4.69	4.97	90.93	96.30
200	3.75	0.07	0.21	0.22	91.14	96.52
230	4.00	0.06	0.20	0.21	91.34	96.73
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.90	2.77	2.32	-0.49	-1.83	-3.43
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	1.14	0.45	2.2	-1.03	2.55	


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102		
Depths and elevations based on measured values						
Project Name: BOEM Cultural Resource Investigation						
Sample Name: SSVC-14-08 #2						
Analysis Date: 11-21-14						
Analyzed By: DA						
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):
3,497,575		153,189		Louisiana South State Plane		-29.7 NAVD 88
USCS:	Munsell:	Wet - 5Y-4/1	Comments:			
SW-SM		Dry - 5Y-5/1				
	Washed - 5Y-7/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):
96.31	90.99	0.17	0.00	#200 - 6.18		15
				#230 - 5.70		
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	1.90	1.97	1.90	1.97
3 1/2	-2.50	5.66	0.96	1.00	2.86	2.97
4	-2.25	4.76	0.32	0.33	3.18	3.30
5	-2.00	4.00	0.67	0.70	3.85	4.00
7	-1.50	2.83	0.85	0.88	4.70	4.88
10	-1.00	2.00	1.20	1.25	5.90	6.13
14	-0.50	1.41	1.59	1.65	7.49	7.78
18	0.00	1.00	1.29	1.34	8.78	9.12
25	0.50	0.71	1.12	1.16	9.90	10.28
35	1.00	0.50	2.20	2.28	12.10	12.56
45	1.50	0.35	3.46	3.59	15.56	16.15
60	2.00	0.25	8.74	9.07	24.30	25.22
80	2.50	0.18	20.14	20.91	44.44	46.13
120	3.00	0.13	39.30	40.81	83.74	86.94
170	3.50	0.09	5.90	6.13	89.64	93.07
200	3.75	0.07	0.72	0.75	90.36	93.82
230	4.00	0.06	0.46	0.48	90.82	94.30
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	2.96	2.85	2.55	1.99	1.48	-1.45
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.02	0.25	1.41	-2.25	7.72	


GRANULARMETRIC REPORT SHIP\_SMOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15

Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SSVC-14-08 #3							
Analysis Date: 11-26-14							
Analyzed By: DA							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,497,575		153,189		Louisiana South State Plane		-32.8 NAVD 88	
USCS:		Munsell:		Comments:			
SP		Wet - 5Y-4/2 Dry - 5Y-5/2 Washed - 5Y-7/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
97.30	95.63	0.06	0.00	#200 - 1.94 #230 - 1.81		2	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16	-3.00	8.00	0.00	0.00	0.00	0.00	
3 1/2	-2.50	5.66	0.00	0.00	0.00	0.00	
4	-2.25	4.76	0.05	0.05	0.05	0.05	
5	-2.00	4.00	0.06	0.06	0.11	0.11	
7	-1.50	2.83	0.08	0.08	0.19	0.19	
10	-1.00	2.00	0.10	0.10	0.29	0.29	
14	-0.50	1.41	0.10	0.10	0.39	0.39	
18	0.00	1.00	0.09	0.09	0.48	0.48	
25	0.50	0.71	0.14	0.14	0.62	0.62	
35	1.00	0.50	0.13	0.13	0.75	0.75	
45	1.50	0.35	0.78	0.80	1.53	1.55	
60	2.00	0.25	4.65	4.78	6.18	6.33	
80	2.50	0.18	16.63	17.09	22.81	23.42	
120	3.00	0.13	58.85	60.48	81.66	83.90	
170	3.50	0.09	13.33	13.70	94.99	97.60	
200	3.75	0.07	0.45	0.46	95.44	98.06	
230	4.00	0.06	0.13	0.13	95.57	98.19	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.41	3.00	2.93	2.72	2.51	2.28	1.86	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.65	0.16	0.49	-3.37	27.68		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15


Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-01 #1							
Analysis Date: 03-05-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,468,302		336,842		Louisiana South State Plane		-36.5 NAVD 88	
USCS:	Munsell:	Wet - 2.5Y-3/1	Comments:				
ML		Dry - 2.5Y-6/1					
Washed - 2.5Y-6/1							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
81.13	25.47	6.66	0.16	#200 - 77.97		14	
				#230 - 76.97			
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.00	0.00	0.00	0.00	
4	-2.25	4.76	0.00	0.00	0.00	0.00	
5	-2.00	4.00	0.00	0.00	0.00	0.00	
7	-1.50	2.83	0.19	0.23	0.19	0.23	
10	-1.00	2.00	0.07	0.09	0.26	0.32	
14	-0.50	1.41	0.16	0.20	0.42	0.52	
18	0.00	1.00	0.15	0.18	0.57	0.70	
25	0.50	0.71	0.14	0.17	0.71	0.87	
35	1.00	0.50	0.20	0.25	0.91	1.12	
45	1.50	0.35	0.13	0.16	1.04	1.28	
60	2.00	0.25	0.66	0.81	1.70	2.09	
80	2.50	0.18	3.43	4.23	5.13	6.32	
120	3.00	0.13	6.27	7.73	11.40	14.05	
170	3.50	0.09	4.20	5.18	15.60	19.23	
200	3.75	0.07	2.27	2.80	17.87	22.03	
230	4.00	0.06	0.81	1.00	18.68	23.03	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
					3.19	2.34	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.72	0.15	0.91	-2.37	10.92		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15


Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-01 #2							
Analysis Date: 03-04-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,468,302		336,842		Louisiana South State Plane		-41.1 NAVD 88	
USCS:		Munsell:		Comments:			
SW-SC		Wet - 2.5Y-4/1 Dry - 2.5Y-5/1 Washed - 2.5Y-6/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.38	80.36	0.04	0.02	#200 - 5.28 #230 - 4.85		12	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	1.24	1.47	1.24	1.47	
5/16"	-3.00	8.00	0.35	0.41	1.59	1.88	
3.5	-2.50	5.66	0.38	0.45	1.97	2.33	
4	-2.25	4.76	0.17	0.20	2.14	2.53	
5	-2.00	4.00	0.14	0.17	2.28	2.70	
7	-1.50	2.83	0.38	0.45	2.66	3.15	
10	-1.00	2.00	0.34	0.40	3.00	3.55	
14	-0.50	1.41	0.67	0.79	3.67	4.34	
18	0.00	1.00	0.81	0.96	4.48	5.30	
25	0.50	0.71	0.83	0.98	5.31	6.28	
35	1.00	0.50	1.03	1.22	6.34	7.50	
45	1.50	0.35	0.99	1.17	7.33	8.67	
60	2.00	0.25	5.02	5.95	12.35	14.62	
80	2.50	0.18	26.71	31.65	39.06	46.27	
120	3.00	0.13	30.30	35.91	69.36	82.18	
170	3.50	0.09	9.50	11.26	78.86	93.44	
200	3.75	0.07	1.08	1.28	79.94	94.72	
230	4.00	0.06	0.36	0.43	80.30	95.15	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.91	3.08	2.90	2.55	2.16	2.02	-0.16	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.26	0.21	1.22	-3.18	14.31		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15




Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-01 #3							
Analysis Date: 03-05-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,468,302		336,842		Louisiana South State Plane		-44.1 NAVD 88	
USCS:	Munsell:	Wet - 2.5Y-3/1	Dry - 2.5Y-5/1	Washed - 2.5Y-6/1	Comments:		
SC							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.11	66.23	0.39	0.01	#200 - 22.08		7	
				#230 - 20.79			
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.00	0.00	0.00	0.00	
4	-2.25	4.76	0.05	0.06	0.05	0.06	
5	-2.00	4.00	0.06	0.07	0.11	0.13	
7	-1.50	2.83	0.16	0.19	0.27	0.32	
10	-1.00	2.00	0.31	0.37	0.58	0.69	
14	-0.50	1.41	0.40	0.48	0.98	1.17	
18	0.00	1.00	0.38	0.46	1.36	1.63	
25	0.50	0.71	0.43	0.52	1.79	2.15	
35	1.00	0.50	0.52	0.63	2.31	2.78	
45	1.50	0.35	0.43	0.52	2.74	3.30	
60	2.00	0.25	1.94	2.33	4.68	5.63	
80	2.50	0.18	15.83	19.05	20.51	24.68	
120	3.00	0.13	26.97	32.45	47.48	57.13	
170	3.50	0.09	14.55	17.51	62.03	74.64	
200	3.75	0.07	2.73	3.28	64.76	77.92	
230	4.00	0.06	1.07	1.29	65.83	79.21	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
		3.53	2.89	2.50	2.27	1.86	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.65	0.16	0.75	-2.67	14.47		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102		
Depths and elevations based on measured values						
Project Name: BOEM Cultural Resource Investigation						
Sample Name: SBVC-15-02 #1						
Analysis Date: 03-05-15						
Analyzed By: ST						
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):
2,474,673		347,706		Louisiana South State Plane		-33.3 NAVD 88
USCS:	Munsell:	Wet - 5Y-4/1	Comments:			
SM		Dry - 5Y-6/1				
Washed - 5Y-6/1						
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):
83.17	73.89	0.13	0.00	#200 - 13.41		5
				#230 - 11.32		
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.31	0.37	0.31	0.37
4	-2.25	4.76	0.05	0.06	0.36	0.43
5	-2.00	4.00	0.04	0.05	0.40	0.48
7	-1.50	2.83	0.15	0.18	0.55	0.66
10	-1.00	2.00	0.28	0.34	0.83	1.00
14	-0.50	1.41	0.29	0.35	1.12	1.35
18	0.00	1.00	0.35	0.42	1.47	1.77
25	0.50	0.71	0.44	0.53	1.91	2.30
35	1.00	0.50	0.41	0.49	2.32	2.79
45	1.50	0.35	0.40	0.48	2.72	3.27
60	2.00	0.25	0.12	0.14	2.84	3.41
80	2.50	0.18	15.89	19.11	18.73	22.52
120	3.00	0.13	40.07	48.18	58.80	70.70
170	3.50	0.09	12.82	15.41	71.62	86.11
200	3.75	0.07	0.40	0.48	72.02	86.59
230	4.00	0.06	1.74	2.09	73.76	88.68
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.43	3.14	2.79	2.53	2.33	2.04
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.64	0.16	0.74	-3.81	24.09	


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-03 #1							
Analysis Date: 03-05-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,312		371,231		Louisiana South State Plane		-33.9 NAVD 88	
USCS:		Munsell:		Comments:			
SW		Wet - 2.5Y-4/1 Dry - 2.5Y-6/1 Washed - 2.5Y-7/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.43	83.63	0.01	0.00	#200 - 2.32 #230 - 2.12		19	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.67	0.78	0.67	0.78	
5/16"	-3.00	8.00	1.54	1.80	2.21	2.58	
3.5	-2.50	5.66	0.83	0.97	3.04	3.55	
4	-2.25	4.76	0.28	0.33	3.32	3.88	
5	-2.00	4.00	0.45	0.53	3.77	4.41	
7	-1.50	2.83	0.91	1.07	4.68	5.48	
10	-1.00	2.00	0.26	0.30	4.94	5.78	
14	-0.50	1.41	2.78	3.25	7.72	9.03	
18	0.00	1.00	1.84	2.15	9.56	11.18	
25	0.50	0.71	2.10	2.46	11.66	13.64	
35	1.00	0.50	1.94	2.27	13.60	15.91	
45	1.50	0.35	4.45	5.21	18.05	21.12	
60	2.00	0.25	10.54	12.34	28.59	33.46	
80	2.50	0.18	23.85	27.92	52.44	61.38	
120	3.00	0.13	27.61	32.32	80.05	93.70	
170	3.50	0.09	3.13	3.66	83.18	97.36	
200	3.75	0.07	0.27	0.32	83.45	97.68	
230	4.00	0.06	0.17	0.20	83.62	97.88	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.18	2.85	2.71	2.30	1.66	1.01	-1.72	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.81	0.29	1.45	-2.08	7.05		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-03 #2							
Analysis Date: 03-04-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,312		371,231		Louisiana South State Plane		-35.2 NAVD 88	
USCS:		Munsell: Wet - 2.5Y-3/1 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1		Comments:			
SC							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
82.92	69.64	0.08	0.01	#200 - 16.66 #230 - 16.12		11	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.77	0.93	0.77	0.93	
5/16"	-3.00	8.00	0.23	0.28	1.00	1.21	
3.5	-2.50	5.66	0.20	0.24	1.20	1.45	
4	-2.25	4.76	0.55	0.66	1.75	2.11	
5	-2.00	4.00	0.45	0.54	2.20	2.65	
7	-1.50	2.83	0.60	0.72	2.80	3.37	
10	-1.00	2.00	0.84	1.01	3.64	4.38	
14	-0.50	1.41	0.76	0.92	4.40	5.30	
18	0.00	1.00	0.66	0.80	5.06	6.10	
25	0.50	0.71	0.59	0.71	5.65	6.81	
35	1.00	0.50	0.56	0.68	6.21	7.49	
45	1.50	0.35	0.63	0.76	6.84	8.25	
60	2.00	0.25	3.19	3.85	10.03	12.10	
80	2.50	0.18	15.34	18.50	25.37	30.60	
120	3.00	0.13	32.90	39.68	58.27	70.28	
170	3.50	0.09	9.86	11.89	68.13	82.17	
200	3.75	0.07	0.97	1.17	69.10	83.34	
230	4.00	0.06	0.45	0.54	69.55	83.88	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
		3.20	2.74	2.35	2.11	-0.66	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.3	0.20	1.3	-2.86	11.37		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15


Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-04 #1							
Analysis Date: 03-05-15							
Analyzed By: ST							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,529		371,939		Louisiana South State Plane		-32.8 NAVD 88	
USCS:		Munsell:		Comments:			
SW		Wet - 10Y-4/1 Dry - 10Y-6/1 Washed - 10Y-7/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.24	86.85	0.23	0.11	#200 - 3.07 #230 - 3.04		16	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.33	0.37	0.33	0.37	
3.5	-2.50	5.66	0.42	0.47	0.75	0.84	
4	-2.25	4.76	0.50	0.56	1.25	1.40	
5	-2.00	4.00	0.44	0.49	1.69	1.89	
7	-1.50	2.83	1.43	1.60	3.12	3.49	
10	-1.00	2.00	1.48	1.66	4.60	5.15	
14	-0.50	1.41	1.67	1.87	6.27	7.02	
18	0.00	1.00	1.37	1.54	7.64	8.56	
25	0.50	0.71	1.67	1.87	9.31	10.43	
35	1.00	0.50	1.87	2.10	11.18	12.53	
45	1.50	0.35	2.47	2.77	13.65	15.30	
60	2.00	0.25	9.09	10.19	22.74	25.49	
80	2.50	0.18	28.16	31.56	50.90	57.05	
120	3.00	0.13	30.99	34.73	81.89	91.78	
170	3.50	0.09	4.25	4.76	86.14	96.54	
200	3.75	0.07	0.35	0.39	86.49	96.93	
230	4.00	0.06	0.03	0.03	86.52	96.96	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.34	2.89	2.76	2.39	1.98	1.53	-1.05	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.01	0.25	1.22	-2.18	7.51		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15


Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-04 #2							
Analysis Date: 03-04-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,529		371,939		Louisiana South State Plane		-36.4 NAVD 88	
USCS:	Munsell:	Wet - 10Y-3/1	Dry - 10Y-5/1	Washed - 10Y-6/1	Comments:		
SM							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
80.52	53.17	1.21	0.00	#200 - 35.50		7	
				#230 - 35.45			
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.71	0.88	0.71	0.88	
5/16"	-3.00	8.00	0.00	0.00	0.71	0.88	
3.5	-2.50	5.66	0.54	0.67	1.25	1.55	
4	-2.25	4.76	0.04	0.05	1.29	1.60	
5	-2.00	4.00	0.06	0.07	1.35	1.67	
7	-1.50	2.83	0.11	0.14	1.46	1.81	
10	-1.00	2.00	0.18	0.22	1.64	2.03	
14	-0.50	1.41	0.24	0.30	1.88	2.33	
18	0.00	1.00	0.20	0.25	2.08	2.58	
25	0.50	0.71	0.20	0.25	2.28	2.83	
35	1.00	0.50	0.16	0.20	2.44	3.03	
45	1.50	0.35	0.27	0.34	2.71	3.37	
60	2.00	0.25	1.16	1.44	3.87	4.81	
80	2.50	0.18	7.43	9.23	11.30	14.04	
120	3.00	0.13	26.85	33.35	38.15	47.39	
170	3.50	0.09	11.64	14.46	49.79	61.85	
200	3.75	0.07	2.13	2.65	51.92	64.50	
230	4.00	0.06	0.04	0.05	51.96	64.55	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
			3.09	2.66	2.53	2.01	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.57	0.17	1.14	-3.97	20.23		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15




Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-05 #1							
Analysis Date: 03-04-15							
Analyzed By: ST							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,606,471		371,691		Louisiana South State Plane		-36.0 NAVD 88	
USCS:	Munsell:	Wet - 2.5Y-4/1	Comments:				
SW		Dry - 2.5Y-6/1					
		Washed - 2.5Y-7/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.29	82.16	0.02	0.00	#200 - 3.86		8	
				#230 - 3.72			
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.20	0.23	0.20	0.23	
7/16"	-3.50	11.31	0.00	0.00	0.20	0.23	
5/16"	-3.00	8.00	0.08	0.09	0.28	0.32	
3.5	-2.50	5.66	0.24	0.28	0.52	0.60	
4	-2.25	4.76	0.19	0.22	0.71	0.82	
5	-2.00	4.00	0.14	0.16	0.85	0.98	
7	-1.50	2.83	0.52	0.61	1.37	1.59	
10	-1.00	2.00	0.56	0.66	1.93	2.25	
14	-0.50	1.41	0.75	0.88	2.68	3.13	
18	0.00	1.00	0.81	0.95	3.49	4.08	
25	0.50	0.71	0.70	0.82	4.19	4.90	
35	1.00	0.50	0.78	0.91	4.97	5.81	
45	1.50	0.35	1.34	1.57	6.31	7.38	
60	2.00	0.25	4.76	5.58	11.07	12.96	
80	2.50	0.18	26.29	30.82	37.36	43.78	
120	3.00	0.13	40.28	47.23	77.64	91.01	
170	3.50	0.09	4.13	4.84	81.77	95.85	
200	3.75	0.07	0.25	0.29	82.02	96.14	
230	4.00	0.06	0.12	0.14	82.14	96.28	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.41	2.93	2.83	2.57	2.20	2.05	0.55	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.32	0.20	0.94	-3.43	17.29		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-05 #2							
Analysis Date: 03-04-15							
Analyzed By: ST							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,606,471		371,691		Louisiana South State Plane		-39.4 NAVD 88	
USCS:		Munsell:		Comments:			
SC		Wet - 2.5Y-3/1 Dry - 2.5Y-5/1 Washed - 2.5Y-6/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.55	57.94	0.19	0.01	#200 - 32.43 #230 - 30.91		9	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.35	0.42	0.35	0.42	
4	-2.25	4.76	0.02	0.02	0.37	0.44	
5	-2.00	4.00	0.39	0.47	0.76	0.91	
7	-1.50	2.83	1.13	1.35	1.89	2.26	
10	-1.00	2.00	0.61	0.73	2.50	2.99	
14	-0.50	1.41	0.52	0.62	3.02	3.61	
18	0.00	1.00	0.31	0.37	3.33	3.98	
25	0.50	0.71	0.26	0.31	3.59	4.29	
35	1.00	0.50	0.24	0.29	3.83	4.58	
45	1.50	0.35	0.36	0.43	4.19	5.01	
60	2.00	0.25	1.27	1.52	5.46	6.53	
80	2.50	0.18	6.96	8.33	12.42	14.86	
120	3.00	0.13	29.38	35.16	41.80	50.02	
170	3.50	0.09	12.31	14.73	54.11	64.75	
200	3.75	0.07	2.36	2.82	56.47	67.57	
230	4.00	0.06	1.27	1.52	57.74	69.09	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
			3.00	2.64	2.52	1.49	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.56	0.17	1.12	-2.94	11.91		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-06 #1							
Analysis Date: 03-05-15							
Analyzed By: ST							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,603		372,532		Louisiana South State Plane		-32.7 NAVD 88	
USCS:		Munsell:		Comments:			
SW		Wet - 2.5Y-5/1 Dry - 2.5Y-6/1 Washed - 2.5Y-7/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.34	88.55	0.00	0.09	#200 - 1.08 #230 - 0.98		10	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.49	0.55	0.49	0.55	
4	-2.25	4.76	0.19	0.21	0.68	0.76	
5	-2.00	4.00	0.23	0.26	0.91	1.02	
7	-1.50	2.83	0.72	0.81	1.63	1.83	
10	-1.00	2.00	0.76	0.85	2.39	2.68	
14	-0.50	1.41	1.12	1.25	3.51	3.93	
18	0.00	1.00	1.35	1.51	4.86	5.44	
25	0.50	0.71	1.17	1.31	6.03	6.75	
35	1.00	0.50	1.52	1.70	7.55	8.45	
45	1.50	0.35	4.55	5.09	12.10	13.54	
60	2.00	0.25	11.49	12.86	23.59	26.40	
80	2.50	0.18	45.52	50.95	69.11	77.35	
120	3.00	0.13	18.44	20.64	87.55	97.99	
170	3.50	0.09	0.81	0.91	88.36	98.90	
200	3.75	0.07	0.02	0.02	88.38	98.92	
230	4.00	0.06	0.09	0.10	88.47	99.02	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.93	2.66	2.48	2.23	1.95	1.60	-0.15	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.01	0.25	0.93	-2.69	11.35		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-07 #1							
Analysis Date: 03-05-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,606,668		372,692		Louisiana South State Plane		-29.2 NAVD 88	
USCS:	Munsell:	Wet - 2.5Y-4/1	Comments:				
SW		Dry - 2.5Y-6/1					
		Washed - 2.5Y-7/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.01	85.04	0.09	0.26	#200 - 1.54		12	
				#230 - 1.51			
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.26	0.30	0.26	0.30	
4	-2.25	4.76	0.39	0.45	0.65	0.75	
5	-2.00	4.00	0.17	0.20	0.82	0.95	
7	-1.50	2.83	0.58	0.67	1.40	1.62	
10	-1.00	2.00	0.83	0.97	2.23	2.59	
14	-0.50	1.41	1.00	1.16	3.23	3.75	
18	0.00	1.00	1.24	1.44	4.47	5.19	
25	0.50	0.71	1.54	1.79	6.01	6.98	
35	1.00	0.50	2.45	2.85	8.46	9.83	
45	1.50	0.35	4.97	5.78	13.43	15.61	
60	2.00	0.25	12.05	14.01	25.48	29.62	
80	2.50	0.18	37.41	43.49	62.89	73.11	
120	3.00	0.13	20.86	24.25	83.75	97.36	
170	3.50	0.09	0.86	1.00	84.61	98.36	
200	3.75	0.07	0.09	0.10	84.70	98.46	
230	4.00	0.06	0.03	0.03	84.73	98.49	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.95	2.72	2.54	2.23	1.84	1.51	-0.07	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2	0.25	0.94	-2.41	9.84		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15


Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-07 #2							
Analysis Date: 03-05-15							
Analyzed By: ST							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,606,668		372,692		Louisiana South State Plane		-32.7 NAVD 88	
USCS:		Munsell:		Comments:			
SP-SM		Wet - 2.5Y-3/1 Dry - 2.5Y-5/1 Washed - 2.5Y-6/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.38	83.46	0.08	0.09	#200 - 6.17 #230 - 5.74		8	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.27	0.31	0.27	0.31	
4	-2.25	4.76	0.18	0.20	0.45	0.51	
5	-2.00	4.00	0.20	0.23	0.65	0.74	
7	-1.50	2.83	0.48	0.54	1.13	1.28	
10	-1.00	2.00	0.34	0.38	1.47	1.66	
14	-0.50	1.41	0.66	0.75	2.13	2.41	
18	0.00	1.00	0.58	0.66	2.71	3.07	
25	0.50	0.71	0.62	0.70	3.33	3.77	
35	1.00	0.50	0.71	0.80	4.04	4.57	
45	1.50	0.35	1.04	1.18	5.08	5.75	
60	2.00	0.25	3.11	3.52	8.19	9.27	
80	2.50	0.18	18.15	20.54	26.34	29.81	
120	3.00	0.13	46.91	53.08	73.25	82.89	
170	3.50	0.09	8.95	10.13	82.20	93.02	
200	3.75	0.07	0.72	0.81	82.92	93.83	
230	4.00	0.06	0.38	0.43	83.30	94.26	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.05	2.93	2.69	2.38	2.16	1.18	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.48	0.18	0.85	-3.41	17.23		

GRANULARMETRIC REPORT SHIP\_SMOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15


Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-07 #3							
Analysis Date: 03-05-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,606,668		372,692		Louisiana South State Plane		-33.5 NAVD 88	
USCS:	Munsell:	Wet - 2.5Y-3/1	Dry - 2.5Y-5/1	Washed - 2.5Y-6/1	Comments:		
SC							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.91	73.55	0.05	0.00	#200 - 15.11		10	
				#230 - 14.45			
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.25	0.29	0.25	0.29	
3.5	-2.50	5.66	0.80	0.93	1.05	1.22	
4	-2.25	4.76	0.51	0.59	1.56	1.81	
5	-2.00	4.00	0.23	0.27	1.79	2.08	
7	-1.50	2.83	0.80	0.93	2.59	3.01	
10	-1.00	2.00	0.72	0.84	3.31	3.85	
14	-0.50	1.41	0.87	1.01	4.18	4.86	
18	0.00	1.00	0.71	0.83	4.89	5.69	
25	0.50	0.71	0.60	0.70	5.49	6.39	
35	1.00	0.50	0.50	0.58	5.99	6.97	
45	1.50	0.35	0.63	0.73	6.62	7.70	
60	2.00	0.25	1.34	1.56	7.96	9.26	
80	2.50	0.18	16.92	19.70	24.88	28.96	
120	3.00	0.13	41.18	47.93	66.06	76.89	
170	3.50	0.09	6.10	7.10	72.16	83.99	
200	3.75	0.07	0.77	0.90	72.93	84.89	
230	4.00	0.06	0.57	0.66	73.50	85.55	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.50	2.98	2.72	2.40	2.17	-0.42	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.34	0.20	1.17	-2.97	11.79		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15




Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-07 #4							
Analysis Date: 03-04-15							
Analyzed By: ST							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,606,668		372,692		Louisiana South State Plane		-35.2 NAVD 88	
USCS:	Munsell:	Wet - 2.5Y-3/1	Dry - 2.5Y-6/1	Washed - 2.5Y-6/1	Comments:		
SC							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
82.92	64.14	0.09	0.02	#200 - 23.69		13	
				#230 - 22.77			
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.71	0.86	0.71	0.86	
3.5	-2.50	5.66	1.20	1.45	1.91	2.31	
4	-2.25	4.76	0.11	0.13	2.02	2.44	
5	-2.00	4.00	0.19	0.23	2.21	2.67	
7	-1.50	2.83	0.93	1.12	3.14	3.79	
10	-1.00	2.00	0.89	1.07	4.03	4.86	
14	-0.50	1.41	1.08	1.30	5.11	6.16	
18	0.00	1.00	0.90	1.09	6.01	7.25	
25	0.50	0.71	0.69	0.83	6.70	8.08	
35	1.00	0.50	0.62	0.75	7.32	8.83	
45	1.50	0.35	0.95	1.15	8.27	9.98	
60	2.00	0.25	2.26	2.73	10.53	12.71	
80	2.50	0.18	11.43	13.78	21.96	26.49	
120	3.00	0.13	32.09	38.70	54.05	65.19	
170	3.50	0.09	8.17	9.85	62.22	75.04	
200	3.75	0.07	1.05	1.27	63.27	76.31	
230	4.00	0.06	0.76	0.92	64.03	77.23	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
		3.50	2.80	2.45	2.12	-0.95	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.23	0.21	1.39	-2.42	8.35		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-08 #1							
Analysis Date: 03-04-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,812		373,143		Louisiana South State Plane		-28.3 NAVD 88	
USCS:		Munsell: Wet - 2.5Y-5/2 Dry - 2.5Y-6/2 Washed - 2.5Y-7/1		Comments:			
SW							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%): #200 - 1.66 #230 - 1.58	Organics (%):	Carbonates (%):	Shell Hash (%):
89.86	88.53	0.05	0.06			24	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	1.15	1.28	1.15	1.28	
3.5	-2.50	5.66	1.32	1.47	2.47	2.75	
4	-2.25	4.76	0.59	0.66	3.06	3.41	
5	-2.00	4.00	0.60	0.67	3.66	4.08	
7	-1.50	2.83	1.79	1.99	5.45	6.07	
10	-1.00	2.00	1.78	1.98	7.23	8.05	
14	-0.50	1.41	2.49	2.77	9.72	10.82	
18	0.00	1.00	2.38	2.65	12.10	13.47	
25	0.50	0.71	2.87	3.19	14.97	16.66	
35	1.00	0.50	4.16	4.63	19.13	21.29	
45	1.50	0.35	17.63	19.62	36.76	40.91	
60	2.00	0.25	0.03	0.03	36.79	40.94	
80	2.50	0.18	45.69	50.85	82.48	91.79	
120	3.00	0.13	5.30	5.90	87.78	97.69	
170	3.50	0.09	0.51	0.57	88.29	98.26	
200	3.75	0.07	0.07	0.08	88.36	98.34	
230	4.00	0.06	0.07	0.08	88.43	98.42	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.77	2.42	2.33	2.09	1.09	0.40	-1.77	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.44	0.37	1.36	-1.69	5.33		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-08 #2							
Analysis Date: 03-05-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,812		373,143		Louisiana South State Plane		-31.1 NAVD 88	
USCS:		Munsell:		Comments:			
SW		Wet - 2.5Y-4/1 Dry - 2.5Y-6/1 Washed - 2.5Y-7/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.28	84.85	0.03	0.00	#200 - 3.98 #230 - 3.92		11	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.70	0.79	0.70	0.79	
3.5	-2.50	5.66	0.20	0.23	0.90	1.02	
4	-2.25	4.76	0.14	0.16	1.04	1.18	
5	-2.00	4.00	0.38	0.43	1.42	1.61	
7	-1.50	2.83	0.65	0.74	2.07	2.35	
10	-1.00	2.00	0.65	0.74	2.72	3.09	
14	-0.50	1.41	0.93	1.05	3.65	4.14	
18	0.00	1.00	1.01	1.14	4.66	5.28	
25	0.50	0.71	1.05	1.19	5.71	6.47	
35	1.00	0.50	1.28	1.45	6.99	7.92	
45	1.50	0.35	3.18	3.60	10.17	11.52	
60	2.00	0.25	8.30	9.40	18.47	20.92	
80	2.50	0.18	36.77	41.65	55.24	62.57	
120	3.00	0.13	27.85	31.55	83.09	94.12	
170	3.50	0.09	1.52	1.72	84.61	95.84	
200	3.75	0.07	0.16	0.18	84.77	96.02	
230	4.00	0.06	0.05	0.06	84.82	96.08	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.26	2.84	2.70	2.35	2.05	1.74	-0.12	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.1	0.23	1.02	-2.95	12.95		


GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-08 #3							
Analysis Date: 03-04-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,812		373,143		Louisiana South State Plane		-35.1 NAVD 88	
USCS:		Munsell:		Comments:			
SM		Wet - 2.5Y-4/1 Dry - 2.5Y-5/1 Washed - 2.5Y-6/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.02	66.27	0.28	0.01	#200 - 22.24 #230 - 20.53		11	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.62	0.75	0.62	0.75	
4	-2.25	4.76	0.35	0.42	0.97	1.17	
5	-2.00	4.00	0.63	0.76	1.60	1.93	
7	-1.50	2.83	0.88	1.06	2.48	2.99	
10	-1.00	2.00	0.70	0.84	3.18	3.83	
14	-0.50	1.41	0.56	0.67	3.74	4.50	
18	0.00	1.00	0.48	0.58	4.22	5.08	
25	0.50	0.71	0.62	0.75	4.84	5.83	
35	1.00	0.50	0.48	0.58	5.32	6.41	
45	1.50	0.35	0.61	0.73	5.93	7.14	
60	2.00	0.25	0.58	0.70	6.51	7.84	
80	2.50	0.18	16.83	20.27	23.34	28.11	
120	3.00	0.13	32.37	38.99	55.71	67.10	
170	3.50	0.09	7.88	9.49	63.59	76.59	
200	3.75	0.07	0.97	1.17	64.56	77.76	
230	4.00	0.06	1.42	1.71	65.98	79.47	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
		3.42	2.78	2.42	2.20	-0.07	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.38	0.19	1.17	-2.79	10.9		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15


Granularmetric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-09 #1							
Analysis Date: 03-05-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,227		373,140		Louisiana South State Plane		-28.1 NAVD 88	
USCS:		Munsell:		Comments:			
SW		Wet - 2.5Y-5/1 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
92.17	91.05	0.08	0.04	#200 - 1.35 #230 - 1.34		35	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.47	0.51	0.47	0.51	
5/16"	-3.00	8.00	1.91	2.07	2.38	2.58	
3.5	-2.50	5.66	2.67	2.90	5.05	5.48	
4	-2.25	4.76	0.79	0.86	5.84	6.34	
5	-2.00	4.00	1.10	1.19	6.94	7.53	
7	-1.50	2.83	2.80	3.04	9.74	10.57	
10	-1.00	2.00	3.11	3.37	12.85	13.94	
14	-0.50	1.41	4.05	4.39	16.90	18.33	
18	0.00	1.00	4.02	4.36	20.92	22.69	
25	0.50	0.71	3.97	4.31	24.89	27.00	
35	1.00	0.50	6.64	7.20	31.53	34.20	
45	1.50	0.35	17.67	19.17	49.20	53.37	
60	2.00	0.25	26.82	29.10	76.02	82.47	
80	2.50	0.18	12.90	14.00	88.92	96.47	
120	3.00	0.13	1.75	1.90	90.67	98.37	
170	3.50	0.09	0.19	0.21	90.86	98.58	
200	3.75	0.07	0.06	0.07	90.92	98.65	
230	4.00	0.06	0.01	0.01	90.93	98.66	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.45	2.05	1.87	1.41	0.27	-0.77	-2.58	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	0.85	0.55	1.49	-1.29	3.78		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15


Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-09 #2							
Analysis Date: 03-04-05							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,227		373,140		Louisiana South State Plane		-32.1 NAVD 88	
USCS:	Munsell:	Wet - 2.5Y-4/1	Dry - 2.5Y-6/1	Washed - 2.5Y-7/1	Comments:		
SW							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.73	87.23	0.03	0.08	#200 - 1.82		17	
				#230 - 1.79			
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.99	1.12	0.99	1.12	
5/16"	-3.00	8.00	0.43	0.48	1.42	1.60	
3.5	-2.50	5.66	0.23	0.26	1.65	1.86	
4	-2.25	4.76	0.19	0.21	1.84	2.07	
5	-2.00	4.00	0.31	0.35	2.15	2.42	
7	-1.50	2.83	0.79	0.89	2.94	3.31	
10	-1.00	2.00	1.13	1.27	4.07	4.58	
14	-0.50	1.41	1.70	1.92	5.77	6.50	
18	0.00	1.00	1.80	2.03	7.57	8.53	
25	0.50	0.71	2.19	2.47	9.76	11.00	
35	1.00	0.50	2.51	2.83	12.27	13.83	
45	1.50	0.35	4.93	5.56	17.20	19.39	
60	2.00	0.25	18.98	21.39	36.18	40.78	
80	2.50	0.18	38.95	43.90	75.13	84.68	
120	3.00	0.13	11.41	12.86	86.54	97.54	
170	3.50	0.09	0.52	0.59	87.06	98.13	
200	3.75	0.07	0.04	0.05	87.10	98.18	
230	4.00	0.06	0.03	0.03	87.13	98.21	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.90	2.49	2.39	2.11	1.63	1.20	-0.89	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.74	0.30	1.18	-2.51	10		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15




Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-09 #3							
Analysis Date: 03-05-15							
Analyzed By: ST							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,605,227		373,140		Louisiana South State Plane		-35.7 NAVD 88	
USCS:		Munsell:		Comments:			
SW-SM		Wet - 2.5Y-3/1 Dry - 2.5Y-5/1 Washed - 2.5Y-6/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.42	79.29	0.16	0.00	#200 - 9.91 #230 - 9.49		8	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.38	0.43	0.38	0.43	
3.5	-2.50	5.66	0.45	0.51	0.83	0.94	
4	-2.25	4.76	0.39	0.45	1.22	1.39	
5	-2.00	4.00	0.21	0.24	1.43	1.63	
7	-1.50	2.83	0.35	0.40	1.78	2.03	
10	-1.00	2.00	0.47	0.54	2.25	2.57	
14	-0.50	1.41	0.62	0.71	2.87	3.28	
18	0.00	1.00	0.58	0.66	3.45	3.94	
25	0.50	0.71	0.56	0.64	4.01	4.58	
35	1.00	0.50	0.53	0.61	4.54	5.19	
45	1.50	0.35	0.80	0.92	5.34	6.11	
60	2.00	0.25	2.72	3.11	8.06	9.22	
80	2.50	0.18	14.30	16.36	22.36	25.58	
120	3.00	0.13	47.77	54.64	70.13	80.22	
170	3.50	0.09	7.97	9.12	78.10	89.34	
200	3.75	0.07	0.66	0.75	78.76	90.09	
230	4.00	0.06	0.37	0.42	79.13	90.51	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.21	2.95	2.72	2.48	2.21	0.84	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.45	0.18	1	-3.54	16.93		


GRANULARMETRIC REPORT SHIP\_SMOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-10 #1							
Analysis Date: 03-04-15							
Analyzed By: ST							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,604,061		373,784		Louisiana South State Plane		-25.9 NAVD 88	
USCS:	Munsell:	Wet - 2.5Y-5/2	Comments:				
SW		Dry - 2.5Y-6/1					
		Washed - 2.5Y-7/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
91.71	89.57	0.02	0.01	#200 - 2.54		37	
				#230 - 2.38			
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	1.91	2.08	1.91	2.08	
3.5	-2.50	5.66	1.77	1.93	3.68	4.01	
4	-2.25	4.76	1.30	1.42	4.98	5.43	
5	-2.00	4.00	0.95	1.04	5.93	6.47	
7	-1.50	2.83	3.02	3.29	8.95	9.76	
10	-1.00	2.00	2.75	3.00	11.70	12.76	
14	-0.50	1.41	3.76	4.10	15.46	16.86	
18	0.00	1.00	4.08	4.45	19.54	21.31	
25	0.50	0.71	3.92	4.27	23.46	25.58	
35	1.00	0.50	4.02	4.38	27.48	29.96	
45	1.50	0.35	13.27	14.47	40.75	44.43	
60	2.00	0.25	21.06	22.96	61.81	67.39	
80	2.50	0.18	20.00	21.81	81.81	89.20	
120	3.00	0.13	6.79	7.40	88.60	96.60	
170	3.50	0.09	0.60	0.65	89.20	97.25	
200	3.75	0.07	0.19	0.21	89.39	97.46	
230	4.00	0.06	0.15	0.16	89.54	97.62	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.89	2.38	2.17	1.62	0.43	-0.60	-2.33	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.07	0.48	1.53	-1.2	3.59		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Granulometric Report				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation							
Sample Name: SBVC-15-10 #2							
Analysis Date: 03-05-15							
Analyzed By: ST							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
2,604,061		373,784		Louisiana South State Plane		-29.4 NAVD 88	
USCS:		Munsell:		Comments:			
SW		Wet - 2.5Y-4/1 Dry - 2.5Y-5/1 Washed - 2.5Y-6/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.34	87.52	0.03	0.10	#200 - 2.33 #230 - 2.18		7	
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.79	0.88	0.79	0.88	
3.5	-2.50	5.66	0.08	0.09	0.87	0.97	
4	-2.25	4.76	0.06	0.07	0.93	1.04	
5	-2.00	4.00	0.10	0.11	1.03	1.15	
7	-1.50	2.83	0.33	0.37	1.36	1.52	
10	-1.00	2.00	0.33	0.37	1.69	1.89	
14	-0.50	1.41	0.45	0.50	2.14	2.39	
18	0.00	1.00	0.45	0.50	2.59	2.89	
25	0.50	0.71	0.53	0.59	3.12	3.48	
35	1.00	0.50	0.82	0.92	3.94	4.40	
45	1.50	0.35	2.01	2.25	5.95	6.65	
60	2.00	0.25	6.64	7.43	12.59	14.08	
80	2.50	0.18	31.96	35.77	44.55	49.85	
120	3.00	0.13	37.88	42.40	82.43	92.25	
170	3.50	0.09	4.46	4.99	86.89	97.24	
200	3.75	0.07	0.38	0.43	87.27	97.67	
230	4.00	0.06	0.13	0.15	87.40	97.82	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.28	2.90	2.80	2.50	2.15	2.03	1.13	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.32	0.20	0.88	-3.77	21.3		

GRANULARMETRIC REPORT SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

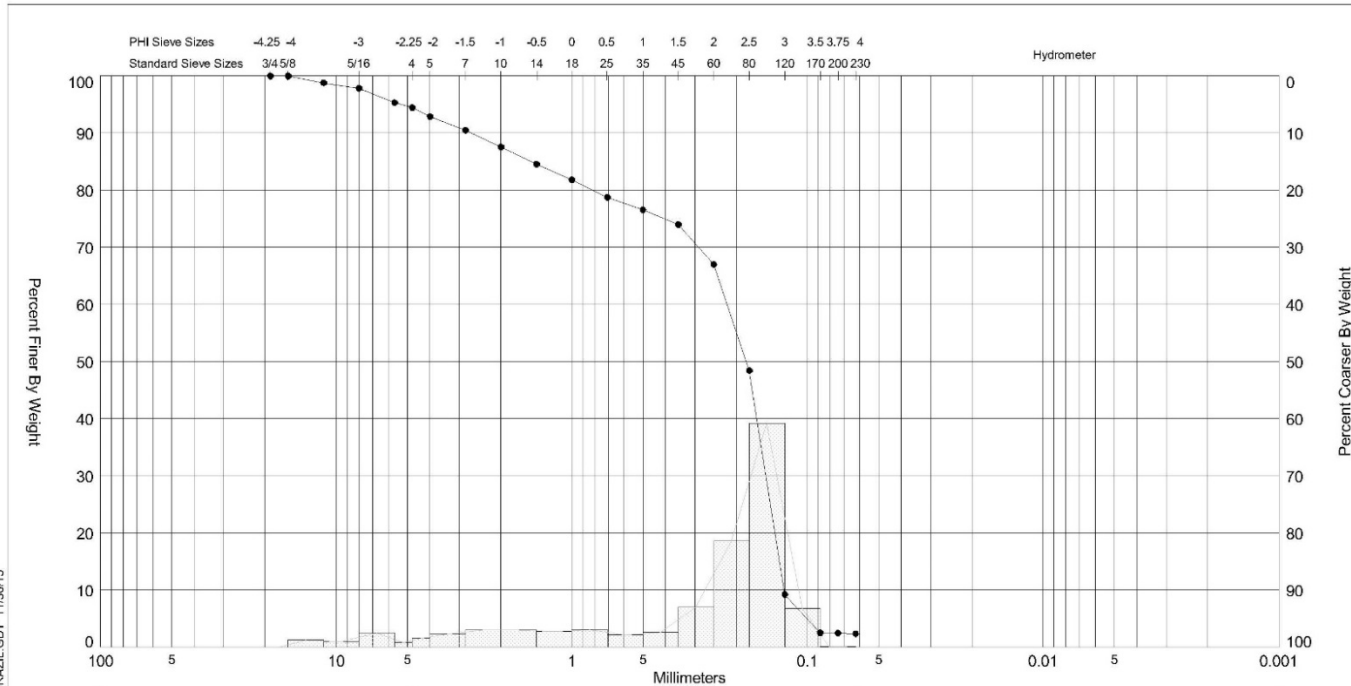
<b>Granulometric Report</b> Depths and elevations based on measured values							
Project Name: BOEM Cultural Resource Investigation				CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Sample Name: SBVC-15-10 #3							
Analysis Date: 03-04-15							
Analyzed By: GS							
Easting (ft): 2,604,061		Northing (ft): 373,784		Coordinate System: Louisiana South State Plane		Elevation (ft): -34.9 NAVD 88	
USCS: SM		Munsell: Wet - 2.5Y-4/1 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1		Comments:			
Dry Weight (g): 89.68	Wash Weight (g): 70.36	Pan Retained (g): 0.29	Sieve Loss (%): 0.06	Fines (%): #200 - 23.18 #230 - 21.94	Organics (%):	Carbonates (%): 14	Shell Hash (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	1.52	1.69	1.52	1.69	
4	-2.25	4.76	0.76	0.85	2.28	2.54	
5	-2.00	4.00	0.47	0.52	2.75	3.06	
7	-1.50	2.83	0.97	1.08	3.72	4.14	
10	-1.00	2.00	0.91	1.01	4.63	5.15	
14	-0.50	1.41	1.04	1.16	5.67	6.31	
18	0.00	1.00	0.77	0.86	6.44	7.17	
25	0.50	0.71	0.81	0.90	7.25	8.07	
35	1.00	0.50	0.55	0.61	7.80	8.68	
45	1.50	0.35	0.77	0.86	8.57	9.54	
60	2.00	0.25	0.03	0.03	8.60	9.57	
80	2.50	0.18	14.79	16.49	23.39	26.06	
120	3.00	0.13	35.03	39.06	58.42	65.12	
170	3.50	0.09	9.37	10.45	67.79	75.57	
200	3.75	0.07	1.12	1.25	68.91	76.82	
230	4.00	0.06	1.11	1.24	70.02	78.06	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
		3.47	2.81	2.47	2.19	-1.07	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.27	0.21	1.38	-2.43	8.19		

GRANULOMETRIC REPORT\_SHP\_SMOAL\_SABINE\_VCS.GPJ\_IPBRAZIL.GDT 11/11/15


## **APPENDIX TT: INDIVIDUAL VIBRACORE GRAIN SIZE DISTRIBUTION CURVES AND HISTOGRAMS**

This appendix contains individual grain size distribution curves and histograms for the vibracore samples collected in 2014 and 2015.

SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JBRRAZL.GDT 11/30/15

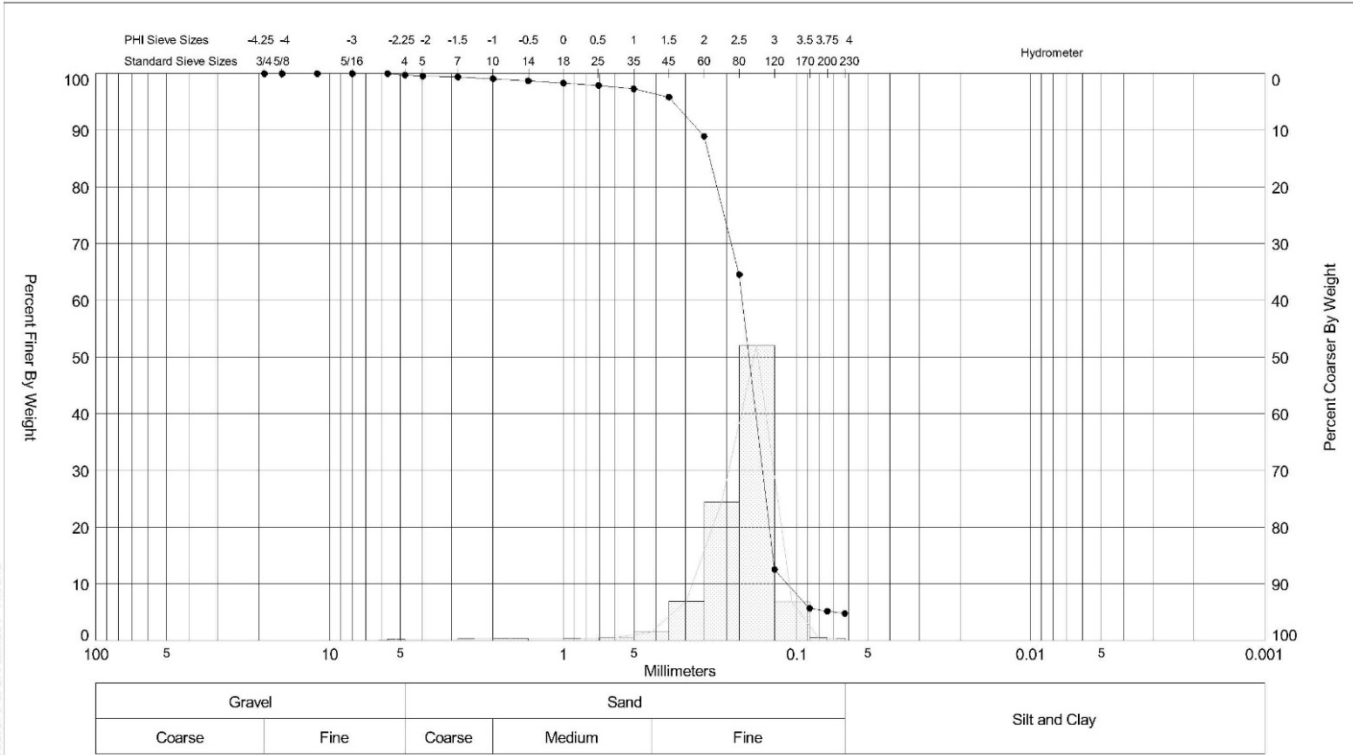


Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

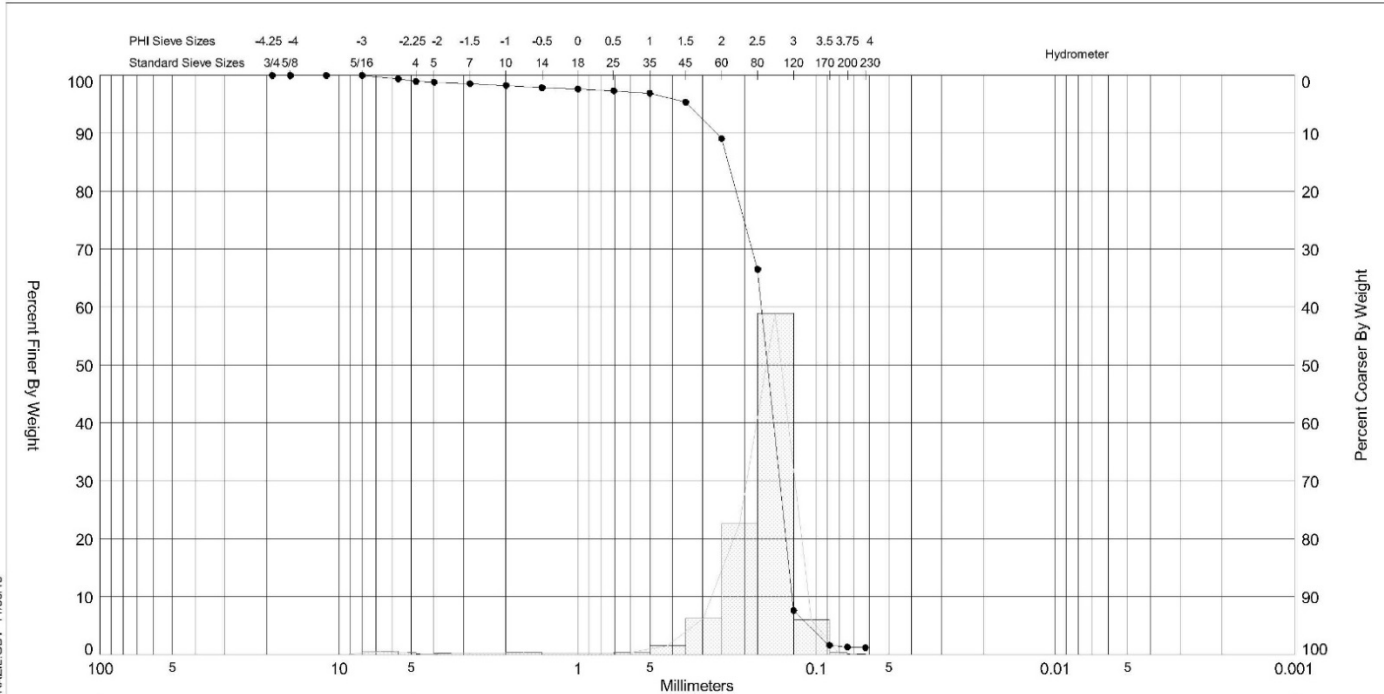
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SSVC-14-02 #1	●	-27.6	SW	#200 - 2.49 #230 - 2.37		25	2.46	1.63	-1.48	4.03	1.76	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	11-26-14
Depths and elevations based on measured values												Analyzed By:	DA
												Easting (X, ft):	3,497,127
												Northing (Y, ft):	152,925
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102													




SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/20/15



SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/20/15

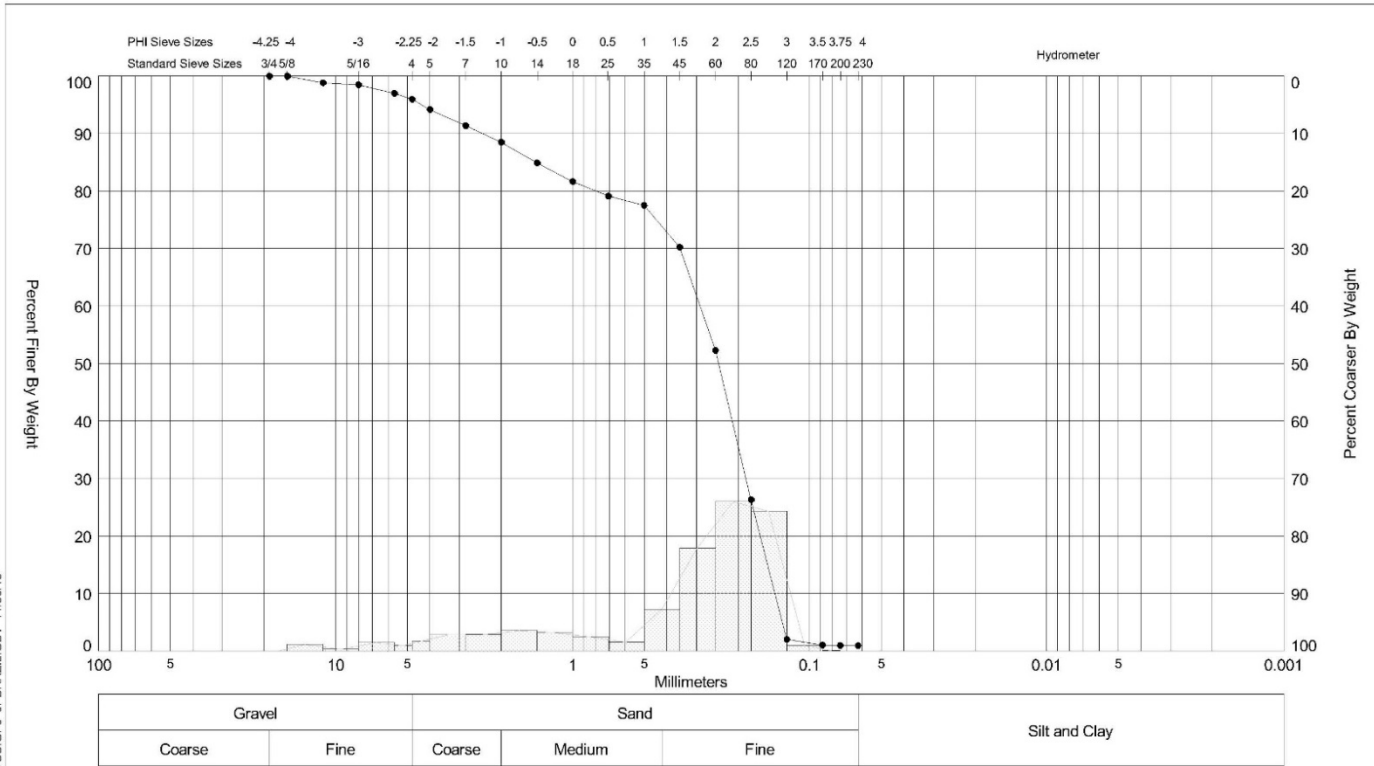


Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SSVC-14-02A #1	•	-32.9	SP	#200 - 1.33 #230 - 1.23		5	2.64	2.46	-4.14	24.31	0.79	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	11-21-14
Depths and elevations based on measured values												Analyzed By:	DA
												Easting (X, ft):	3,497,127
												Northing (Y, ft):	152,925
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102													

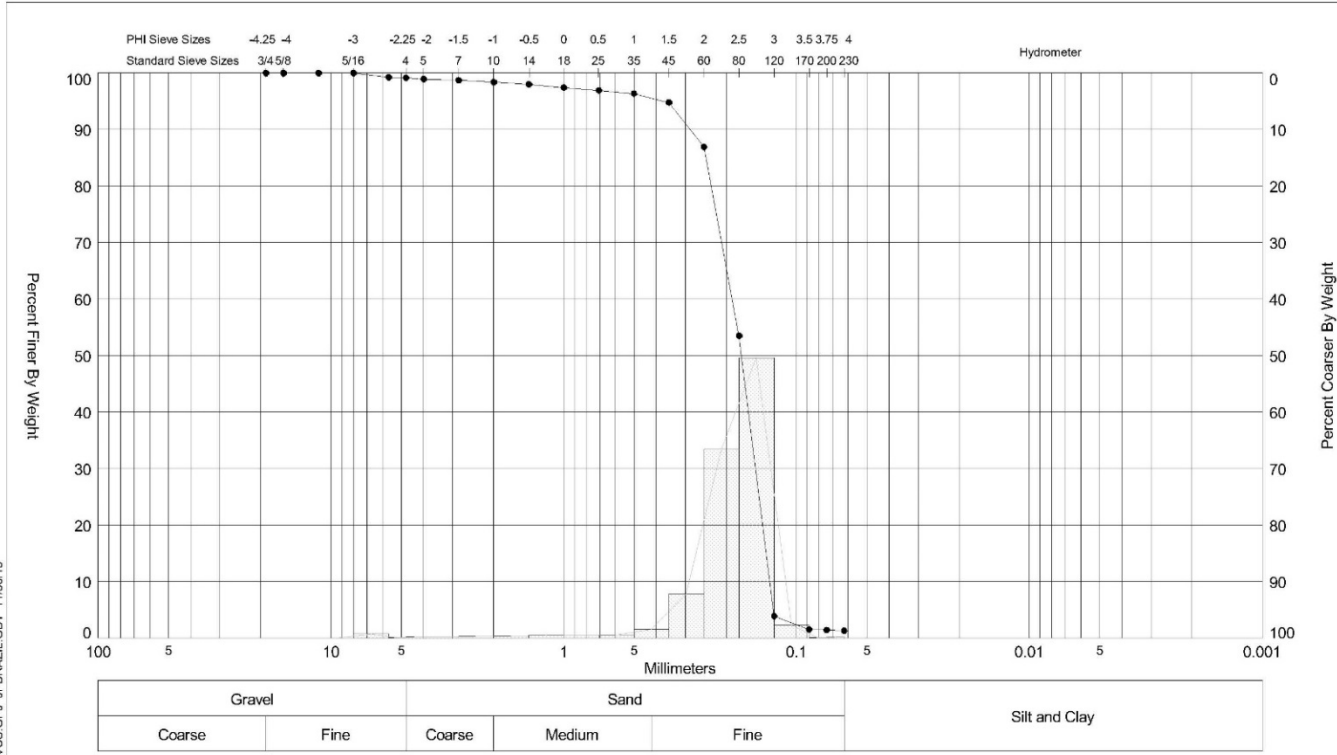


SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/20/15




Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SSVC-14-03 #2	•	-32.8	SW	#200 - 1.01 #230 - 0.97		25	2.04	1.45	-1.48	4.28	1.58	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	11-24-14
Depths and elevations based on measured values												Analyzed By:	DA
						CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102						Easting (X, ft):	3,496,846
												Northing (Y, ft):	154,007
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

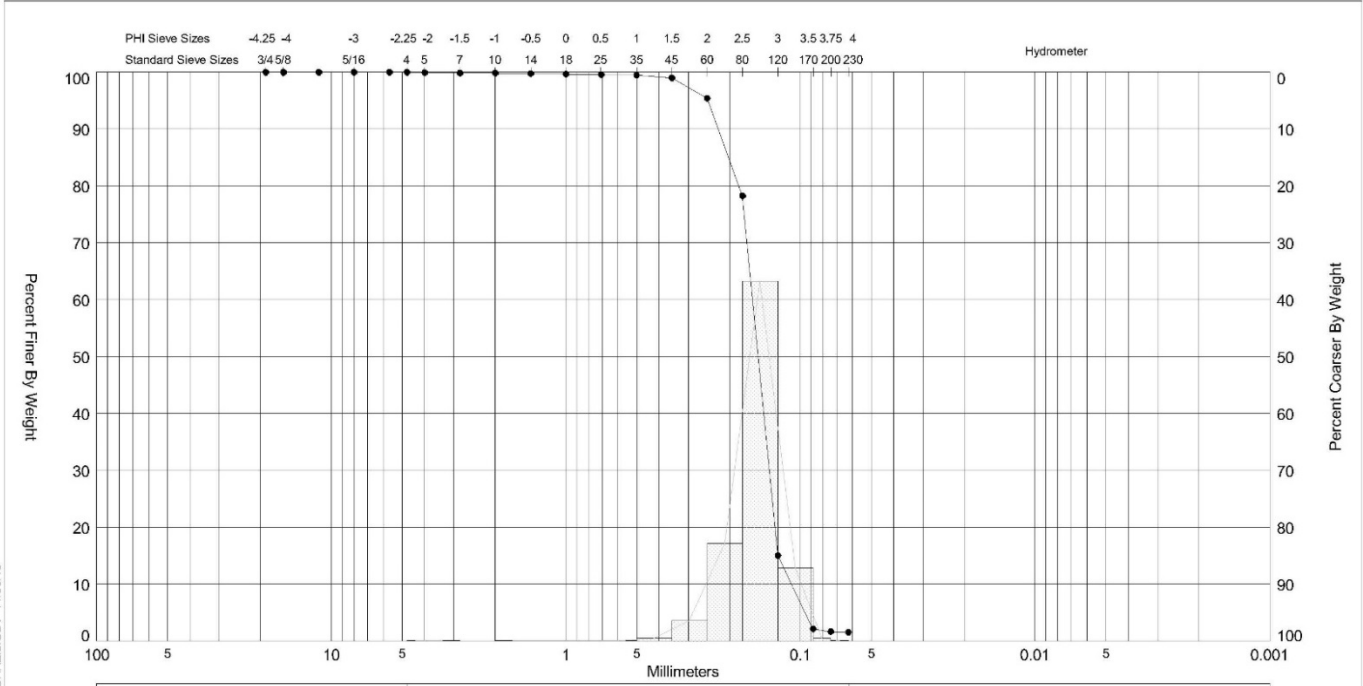
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS GPJ\_JPERAZIL.GDT 11/20/15




Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SSVC-14-03 #3	—●—	-33.8	SP	#200 - 1.46 #230 - 1.33		5	2.54	2.36	-3.95	22.76	0.78	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	11-26-14
Depths and elevations based on measured values												Analyzed By:	DA
 <div style="text-align: center;"> <p>CB&amp;I Coastal Planning &amp; Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102</p> </div>												Easting (X, ft):	3,496,846
												Northing (Y, ft):	154,007
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL\_GDT\_11/30/15

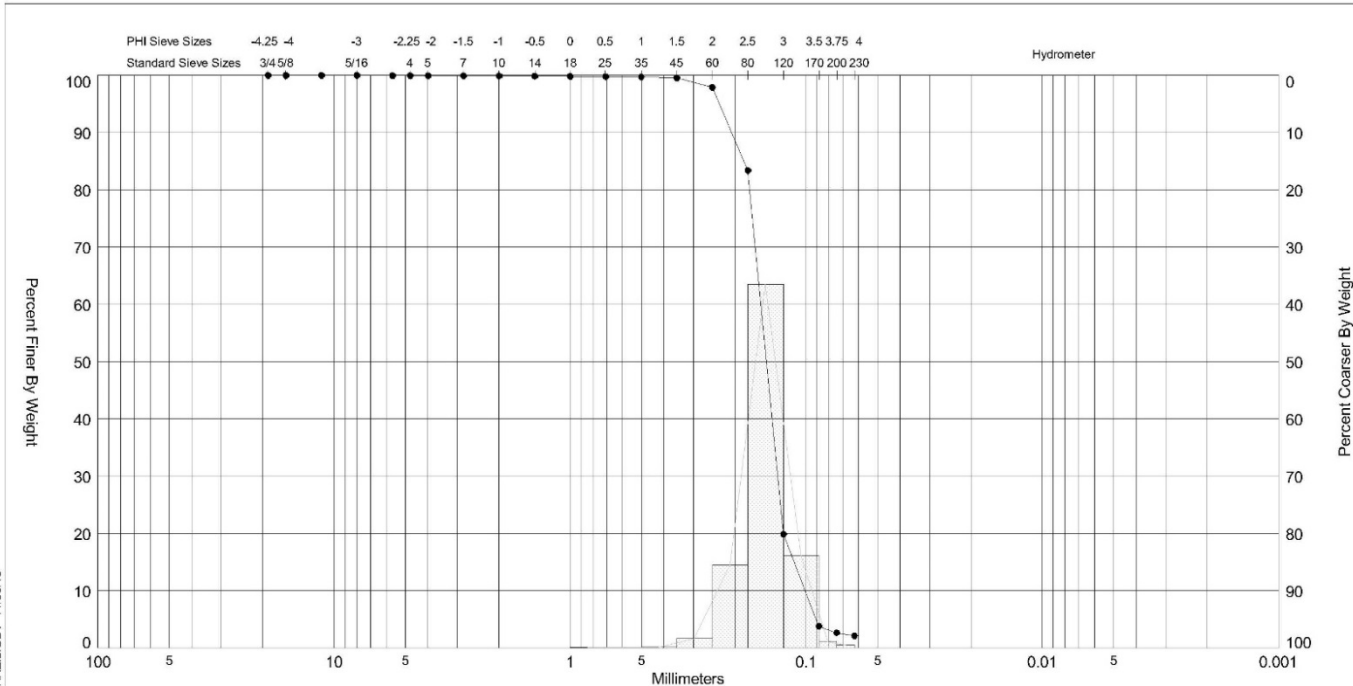


Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	


Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SSVC-14-04 #1	●	-33.8	SP	#200 - 1.70 #290 - 1.58		2	2.72	2.67	-3.05	27.92	0.43	Project Name:	BOEM Cultural Resource Investigation
Comments: (1.37" x 0.75") oyster fragment weighing 5.98 g removed												Analysis Date:	11-26-14
Depths and elevations based on measured values												Analyzed By:	DA
 <div style="text-align: center;"> <p>CB&amp;I Coastal Planning &amp; Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102</p> </div>												Easting (X, ft):	3,509,686
												Northing (Y, ft):	149,683
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88



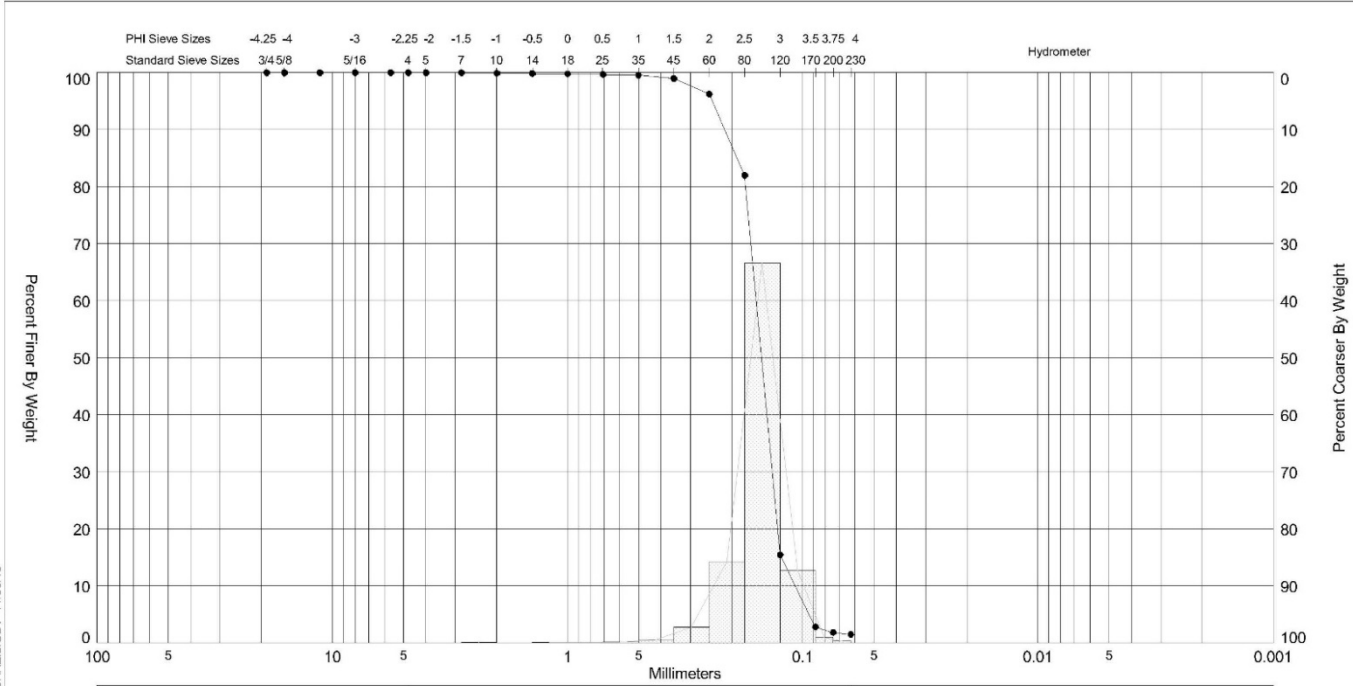
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15




Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SSVC-14-04 #2	•	-36.3	SP	#200 - 2.69 #230 - 2.17		2	2.76	2.74	-2.82	34.9	0.39	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	11-26-14
Depths and elevations based on measured values												Analyzed By:	DA
												Easting (X, ft):	3,509,686
												Northing (Y, ft):	149,683
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102													

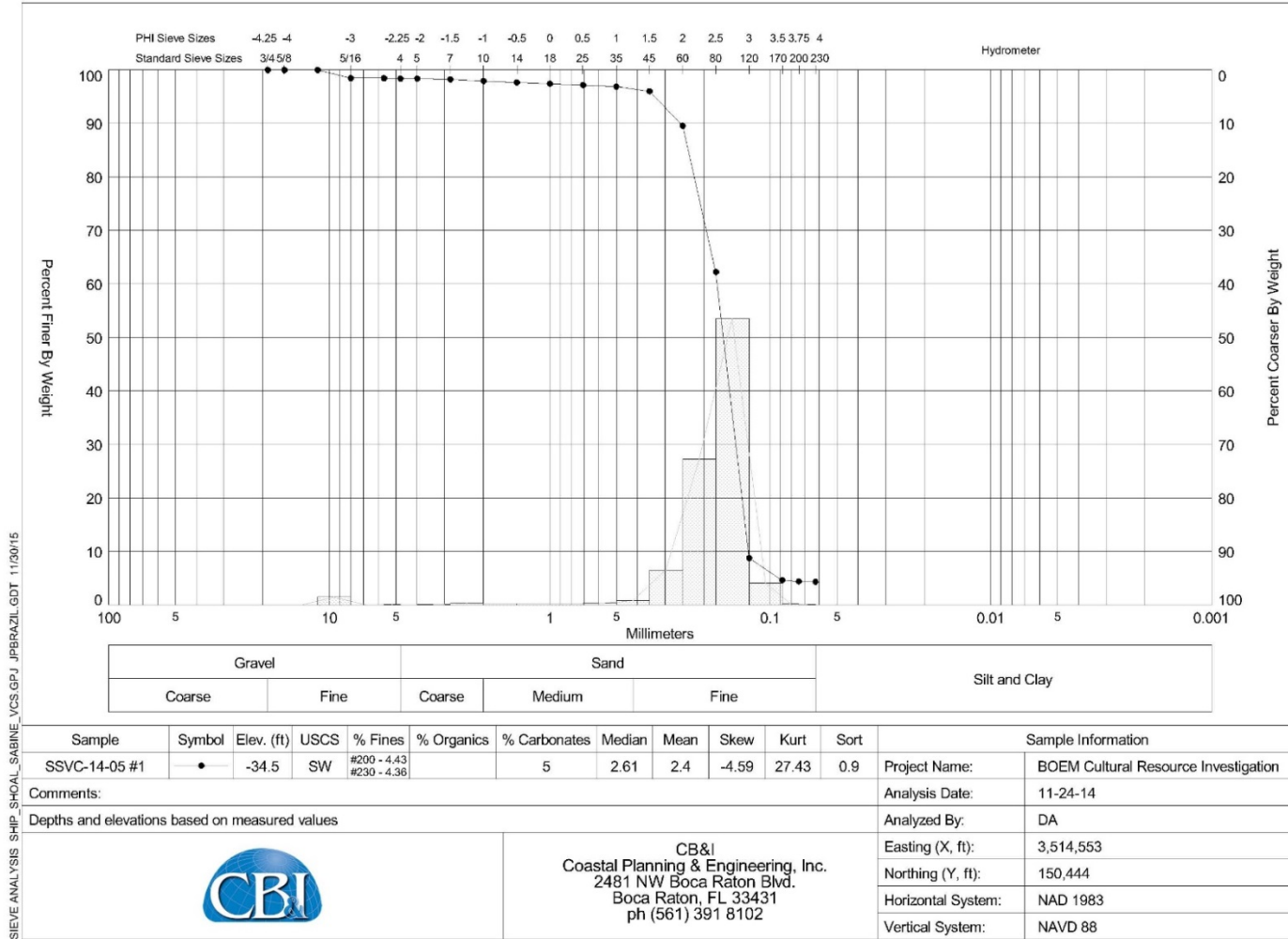
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZL.GDT 11/30/15



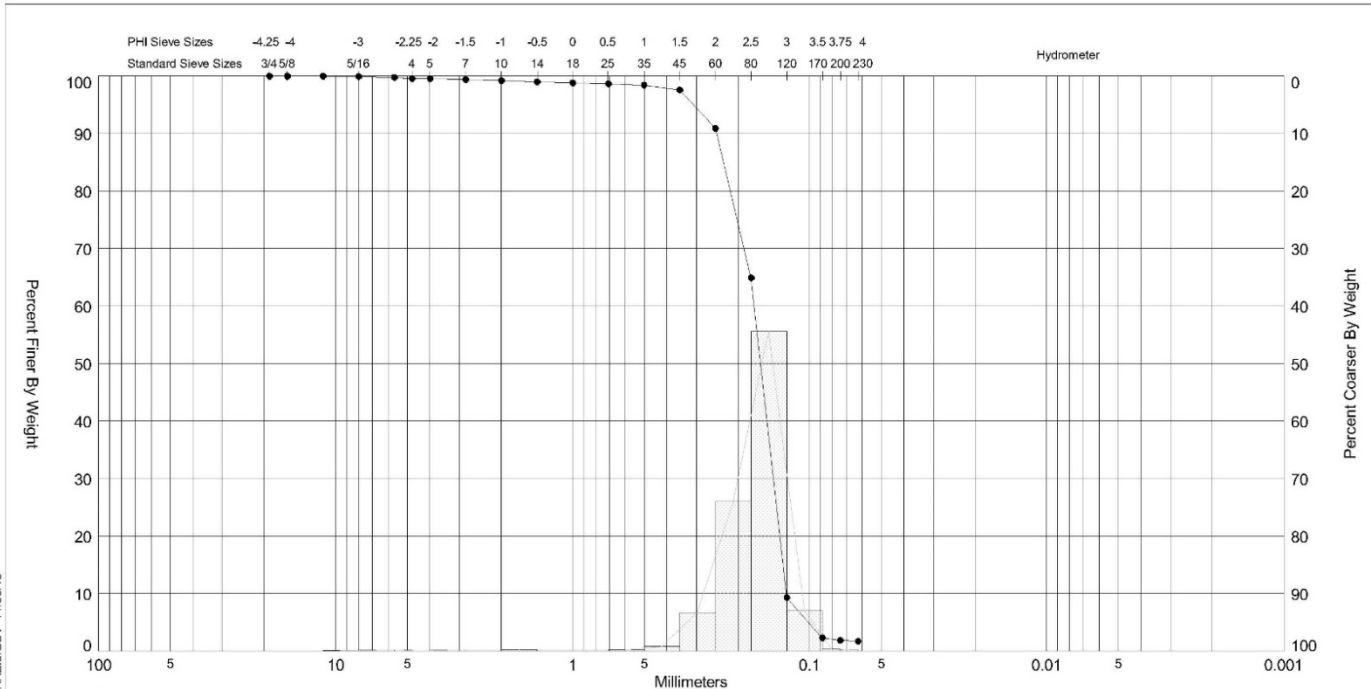
Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SSVC-14-04A #1	•	-40.6	SP	#200 - 1.87 #230 - 1.51		2	2.74	2.7	-2.41	21.13	0.4	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	11-21-14
Depths and elevations based on measured values												Analyzed By:	DA
 <div style="text-align: center;"> <p>CB&amp;I Coastal Planning &amp; Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102</p> </div>												Easting (X, ft):	3,509,686
												Northing (Y, ft):	149,683
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88






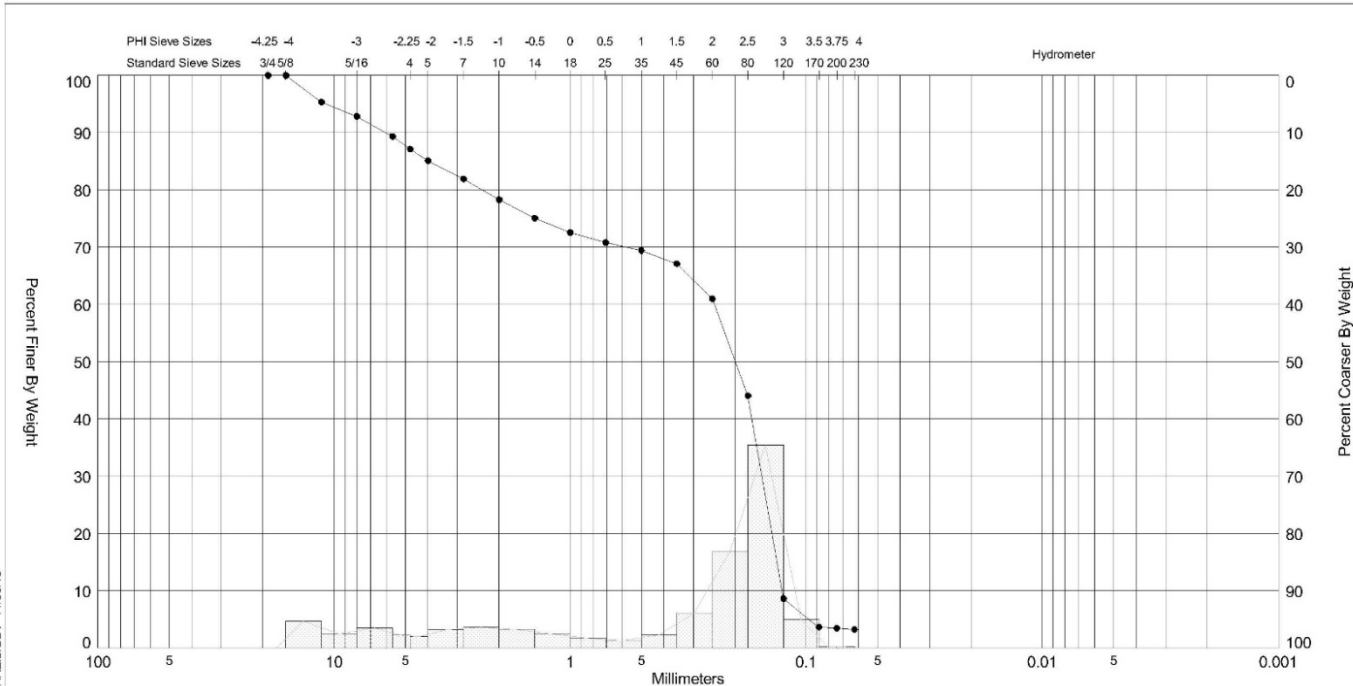
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/20/15






Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SSVC-14-05A #1	•	-37.5	SP	#200 - 1.89 #230 - 1.73		3	2.63	2.52	-4.3	32.47	0.62	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	11-26-14
Depths and elevations based on measured values												Analyzed By:	DA
						CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102						Easting (X, ft):	3,514,553
												Northing (Y, ft):	150,444
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

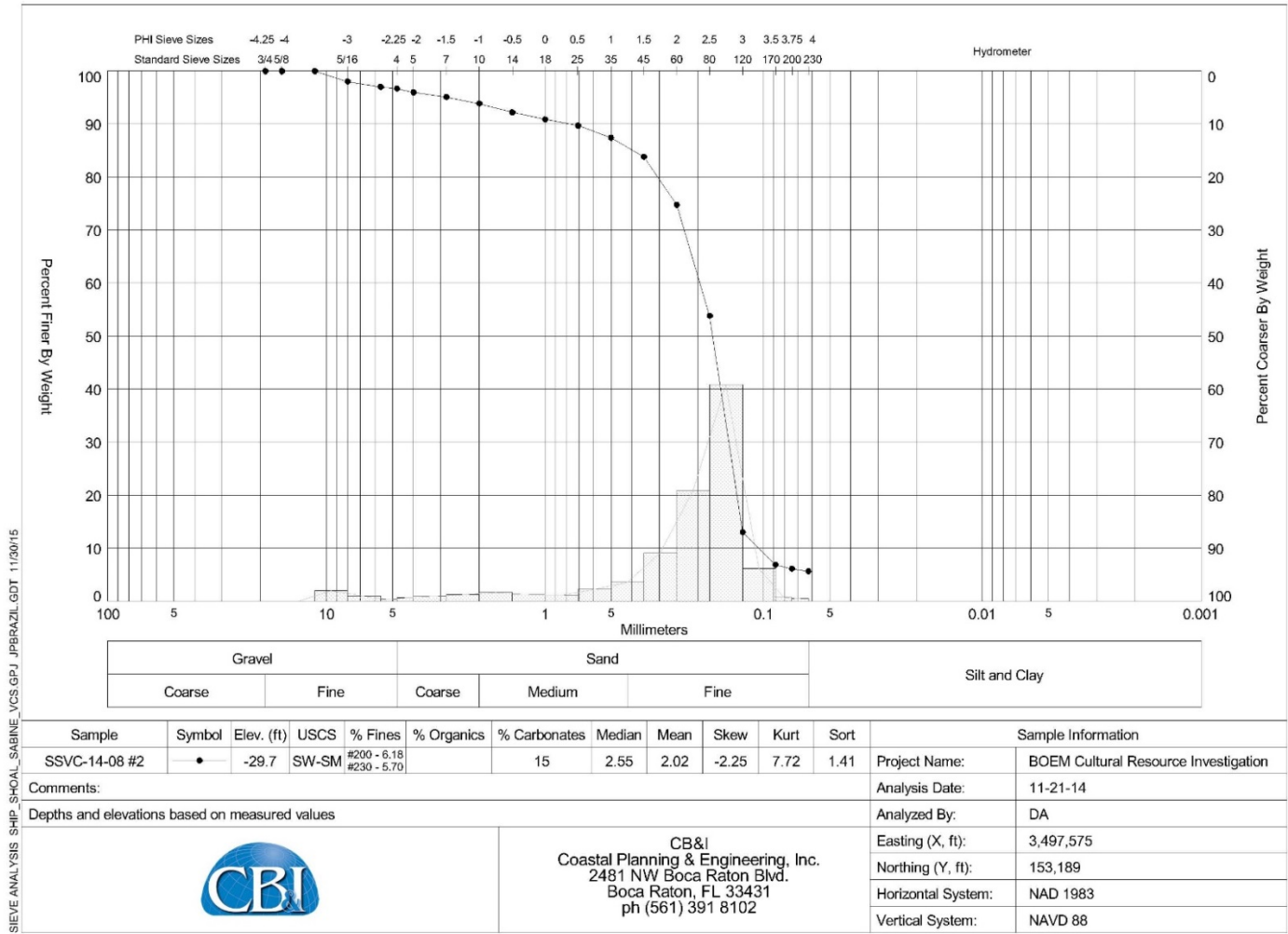
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/30/15



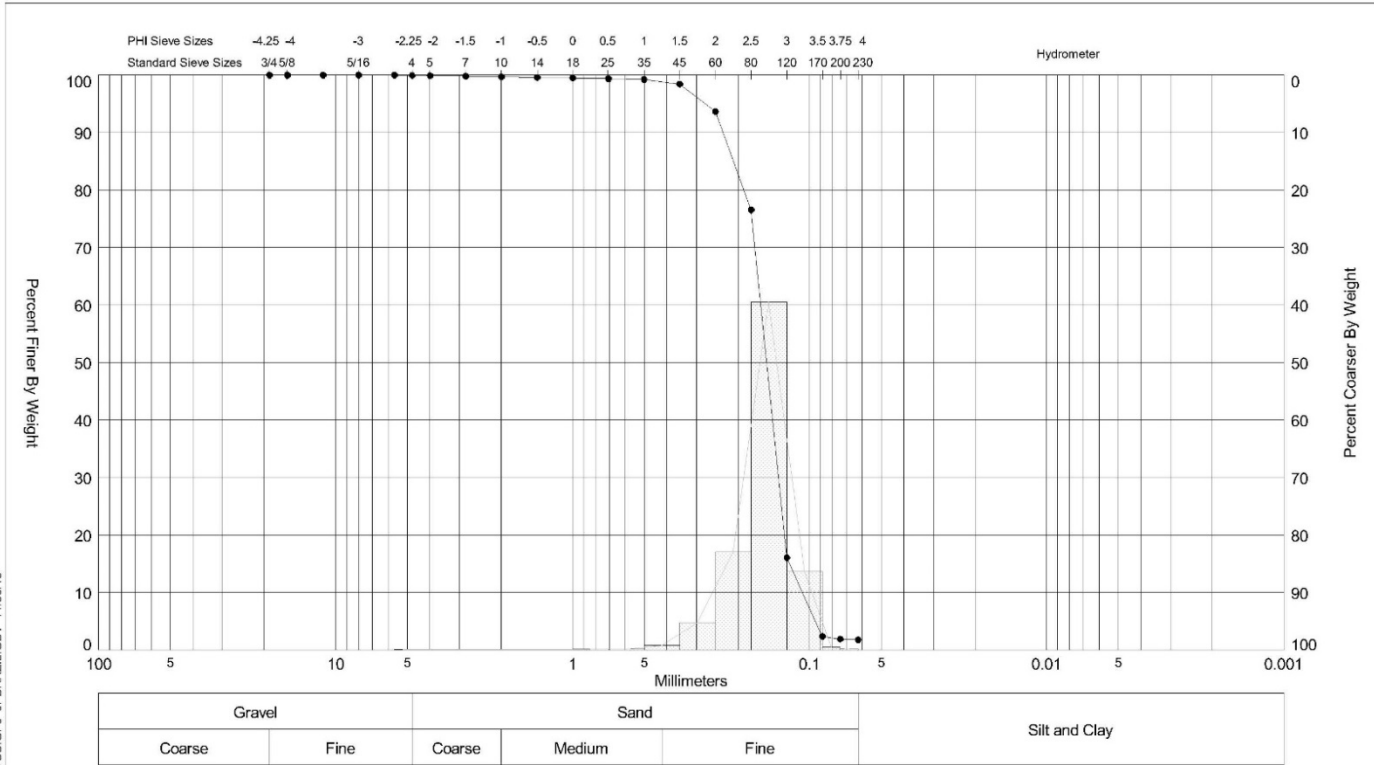
Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	


Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information														
SSVC-14-08 #1	•	-26.8	SW	#200 - 3.48 #230 - 3.27		31	2.32	1.14	-1.03	2.55	2.2	Project Name: BOEM Cultural Resource Investigation														
Comments: (1.32" x 1.19") whole clam weighing 5.19 g removed																										
Depths and elevations based on measured values																										
<table border="0" style="width: 100%;"> <tr> <td style="text-align: center; width: 30%;">  </td> <td style="text-align: center; width: 40%;">                     CB&amp;I                      Coastal Planning &amp; Engineering, Inc.                      2481 NW Boca Raton Blvd.                      Boca Raton, FL 33431                      ph (561) 391 8102                 </td> <td style="width: 30%;"> <table border="1" style="width: 100%;"> <tr><td>Analysis Date:</td><td>11-26-14</td></tr> <tr><td>Analyzed By:</td><td>DA</td></tr> <tr><td>Easting (X, ft):</td><td>3,497,575</td></tr> <tr><td>Northing (Y, ft):</td><td>153,189</td></tr> <tr><td>Horizontal System:</td><td>NAD 1983</td></tr> <tr><td>Vertical System:</td><td>NAVD 88</td></tr> </table> </td> </tr> </table>													CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102	<table border="1" style="width: 100%;"> <tr><td>Analysis Date:</td><td>11-26-14</td></tr> <tr><td>Analyzed By:</td><td>DA</td></tr> <tr><td>Easting (X, ft):</td><td>3,497,575</td></tr> <tr><td>Northing (Y, ft):</td><td>153,189</td></tr> <tr><td>Horizontal System:</td><td>NAD 1983</td></tr> <tr><td>Vertical System:</td><td>NAVD 88</td></tr> </table>	Analysis Date:	11-26-14	Analyzed By:	DA	Easting (X, ft):	3,497,575	Northing (Y, ft):	153,189	Horizontal System:	NAD 1983	Vertical System:	NAVD 88
	CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102	<table border="1" style="width: 100%;"> <tr><td>Analysis Date:</td><td>11-26-14</td></tr> <tr><td>Analyzed By:</td><td>DA</td></tr> <tr><td>Easting (X, ft):</td><td>3,497,575</td></tr> <tr><td>Northing (Y, ft):</td><td>153,189</td></tr> <tr><td>Horizontal System:</td><td>NAD 1983</td></tr> <tr><td>Vertical System:</td><td>NAVD 88</td></tr> </table>	Analysis Date:	11-26-14	Analyzed By:	DA	Easting (X, ft):	3,497,575	Northing (Y, ft):	153,189	Horizontal System:	NAD 1983	Vertical System:	NAVD 88												
Analysis Date:	11-26-14																									
Analyzed By:	DA																									
Easting (X, ft):	3,497,575																									
Northing (Y, ft):	153,189																									
Horizontal System:	NAD 1983																									
Vertical System:	NAVD 88																									





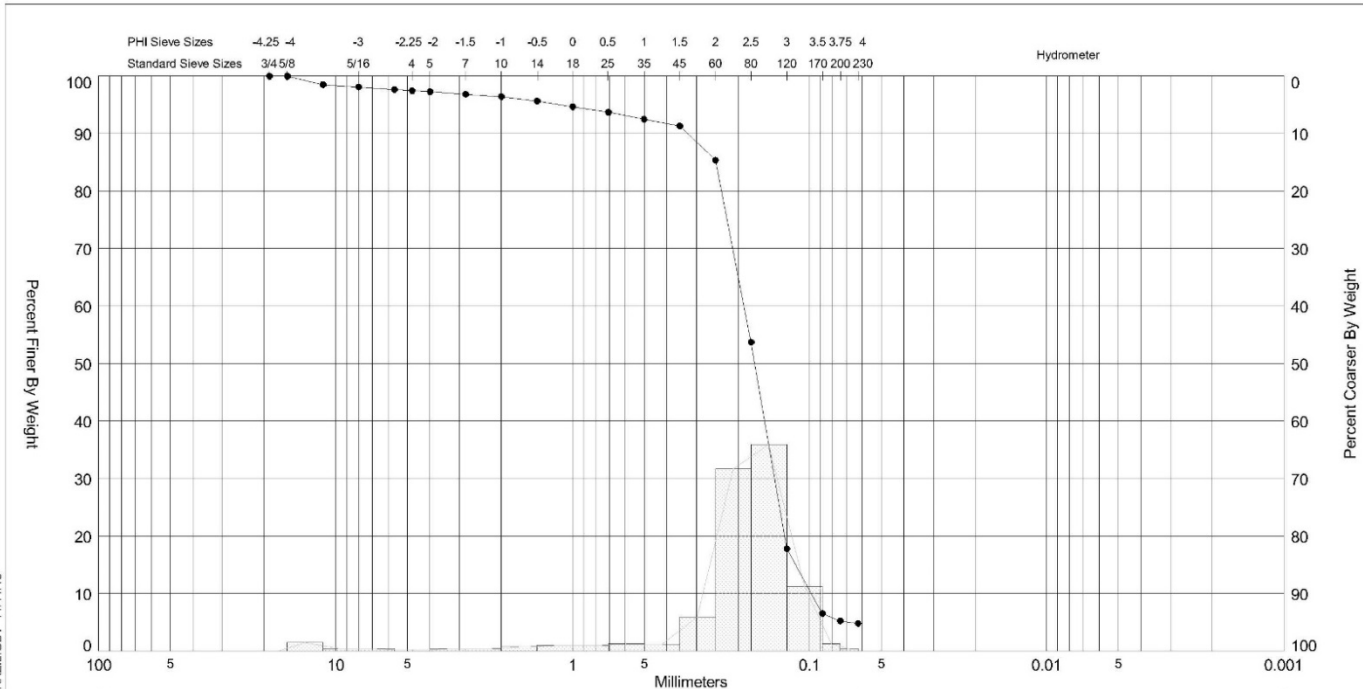
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/20/15




Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SSVC-14-08 #3	•	-32.8	SP	#200 - 1.94 #230 - 1.81		2	2.72	2.65	-3.37	27.68	0.49	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	11-26-14
Depths and elevations based on measured values												Analyzed By:	DA
						CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102						Easting (X, ft):	3,497,575
												Northing (Y, ft):	153,189
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88



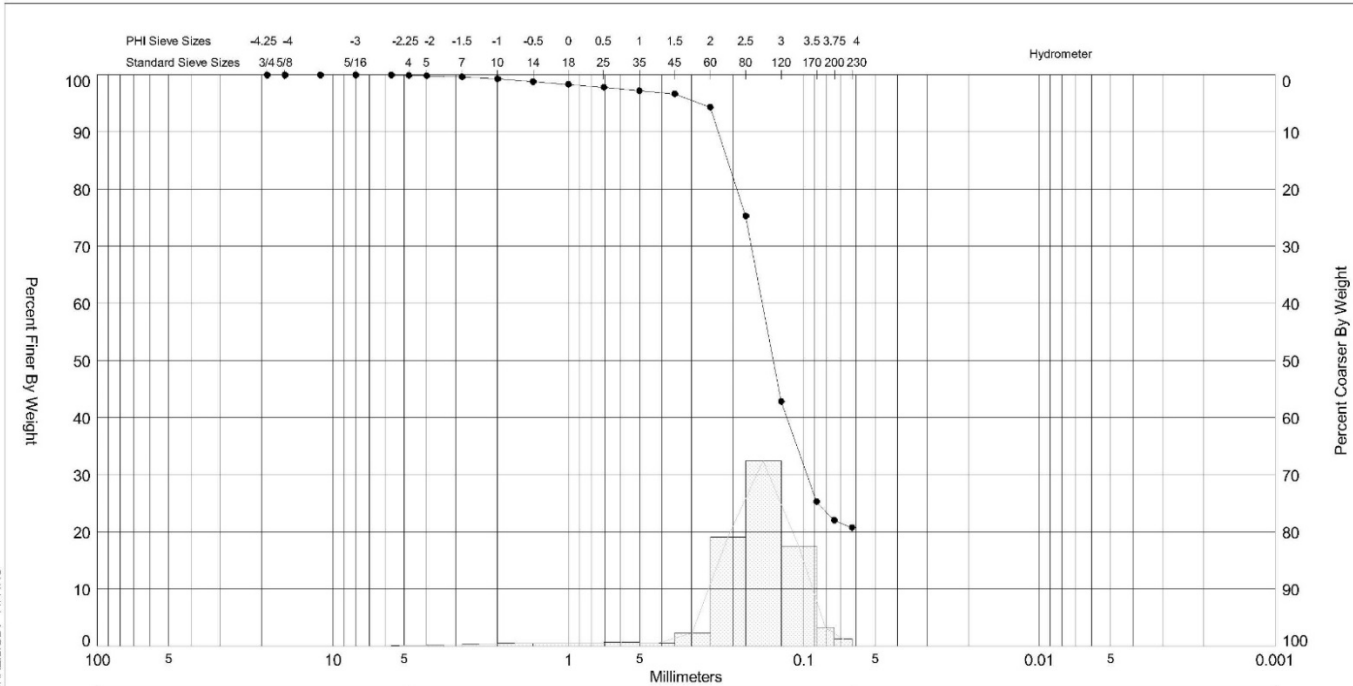
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15




Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-01 #2	•	-41.1	SW-SC	#200 - 5.28 #230 - 4.85		12	2.55	2.26	-3.18	14.31	1.22	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-04-15
Depths and elevations based on measured values												Analyzed By:	GS
						CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102						Easting (X, ft):	2,468,302
												Northing (Y, ft):	336,842
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

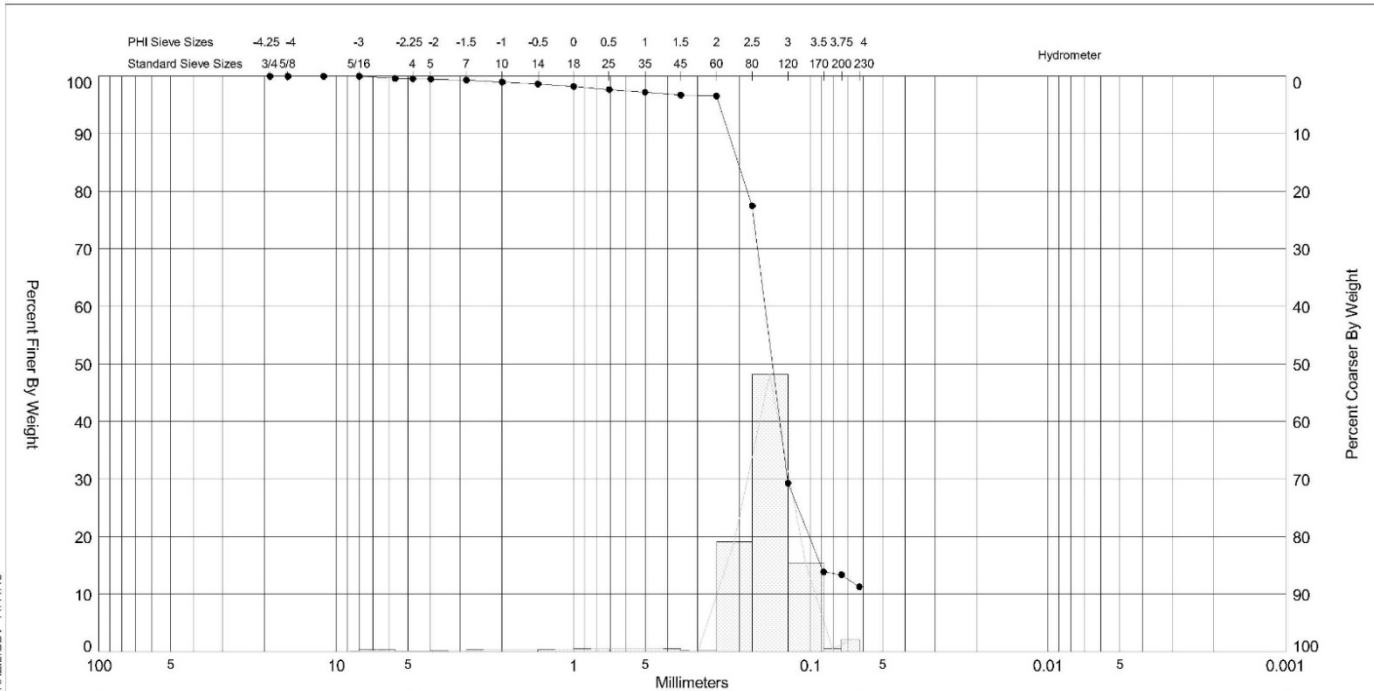
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

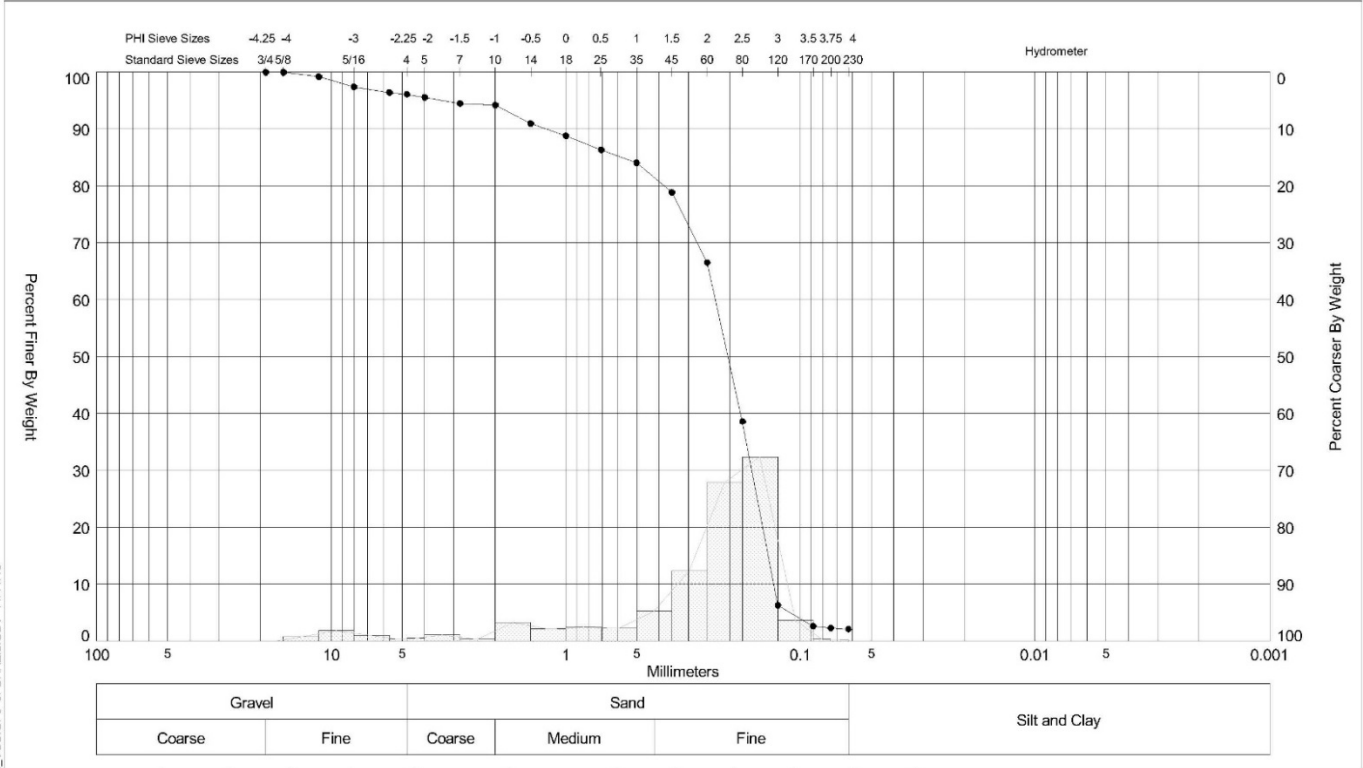
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-01 #3	•	-44.1	SC	#200 - 22.08 #230 - 20.79		7	2.89	2.65	-2.67	14.47	0.75	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-05-15
Depths and elevations based on measured values												Analyzed By:	GS
												Easting (X, ft):	2,468,302
												Northing (Y, ft):	336,842
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102													

SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS\_GPJ\_IPBRAZIL.GDT 11/11/15






SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL\_GDT 11/11/15

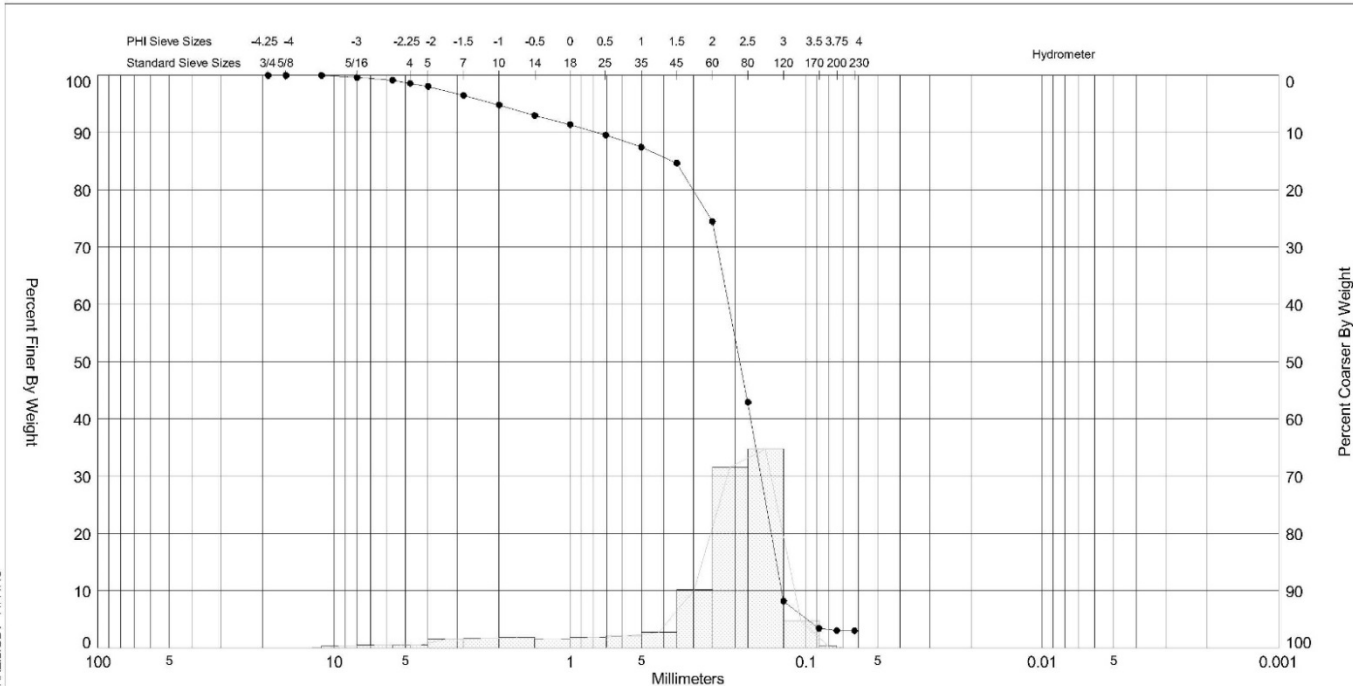


Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	


Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-03 #1	●	-33.9	SW	#200 - 2.32 #290 - 2.12		19	2.3	1.81	-2.08	7.05	1.45	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-05-15
Depths and elevations based on measured values												Analyzed By:	GS
												Easting (X, ft):	2,605,312
												Northing (Y, ft):	371,231
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
												CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102	



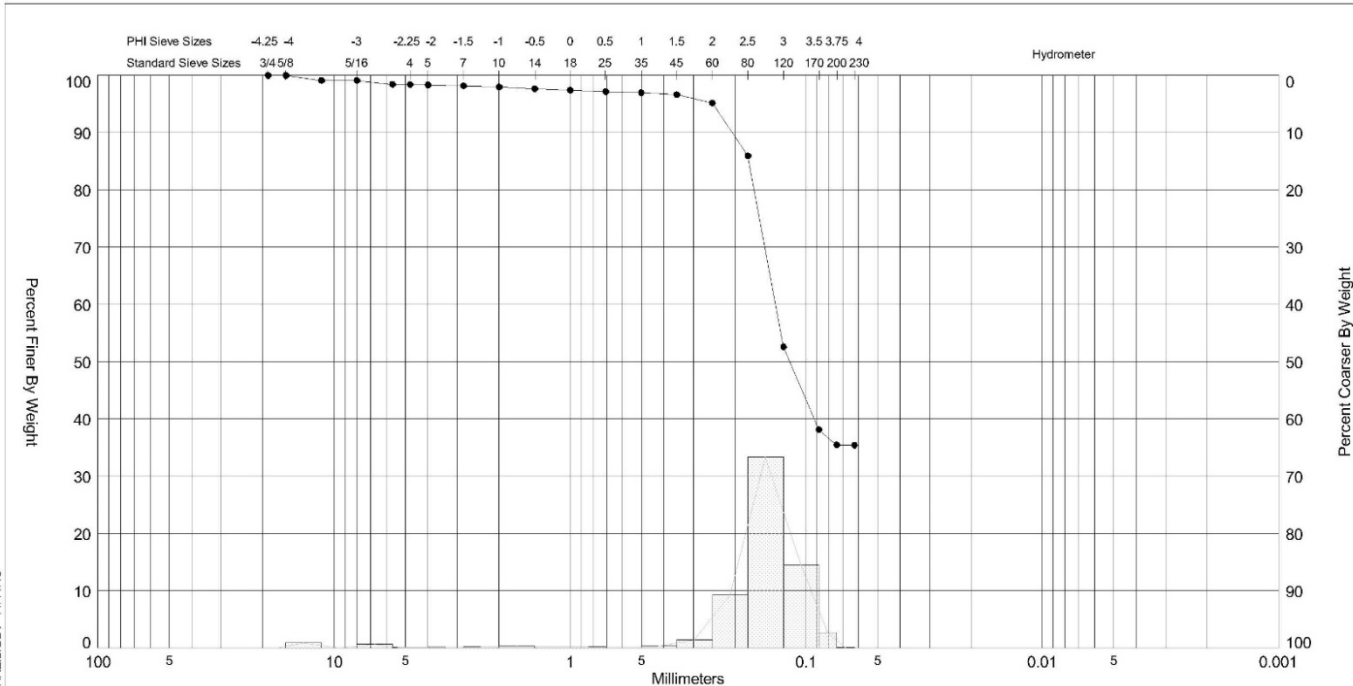
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15




Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-04 #1	•	-32.8	SW	#200 - 3.07 #230 - 3.04		16	2.39	2.01	-2.18	7.51	1.22	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-05-15
Depths and elevations based on measured values												Analyzed By:	ST
												Easting (X, ft):	2,605,529
												Northing (Y, ft):	371,939
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102													

SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

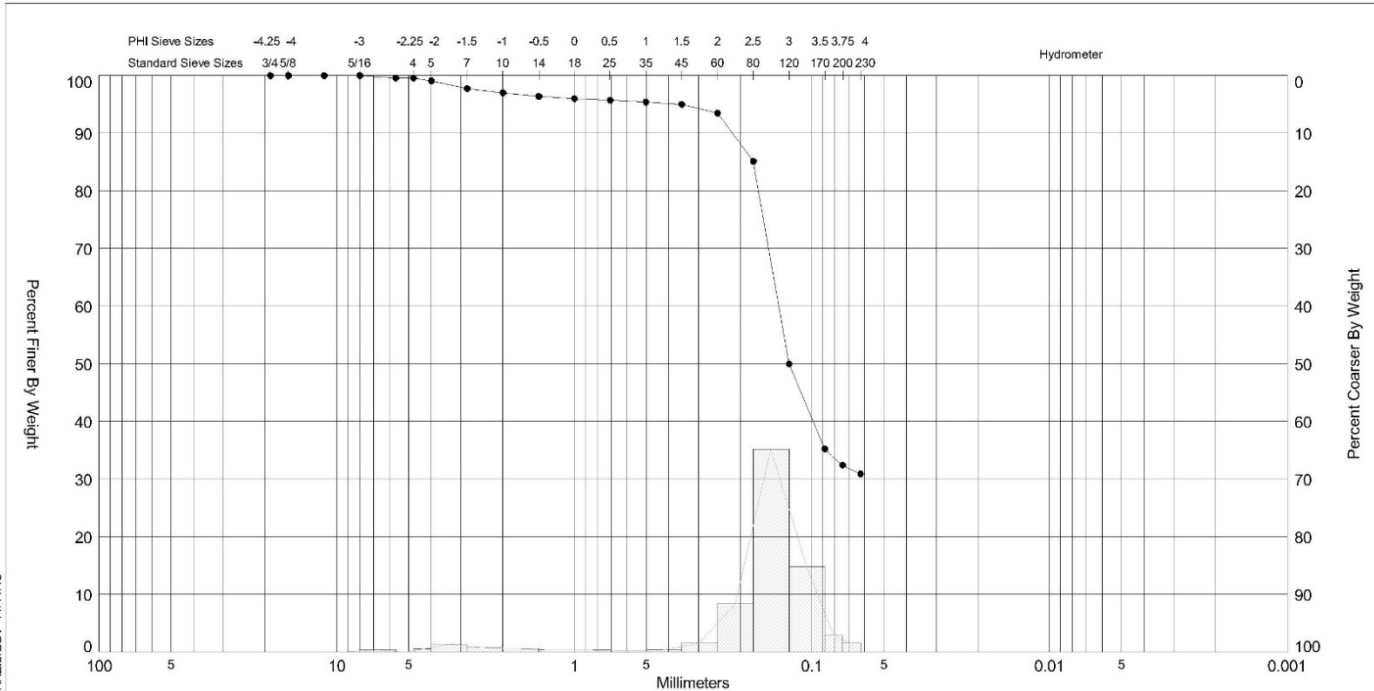


Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	


Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-04 #2	•	-36.4	SM	#200 - 35.50 #230 - 35.45		7	3.09	2.57	-3.97	20.23	1.14	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-04-15
Depths and elevations based on measured values												Analyzed By:	GS
												Easting (X, ft):	2,605,529
												Northing (Y, ft):	371,939
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102													



SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_IPERAZIL.GDT 11/11/15



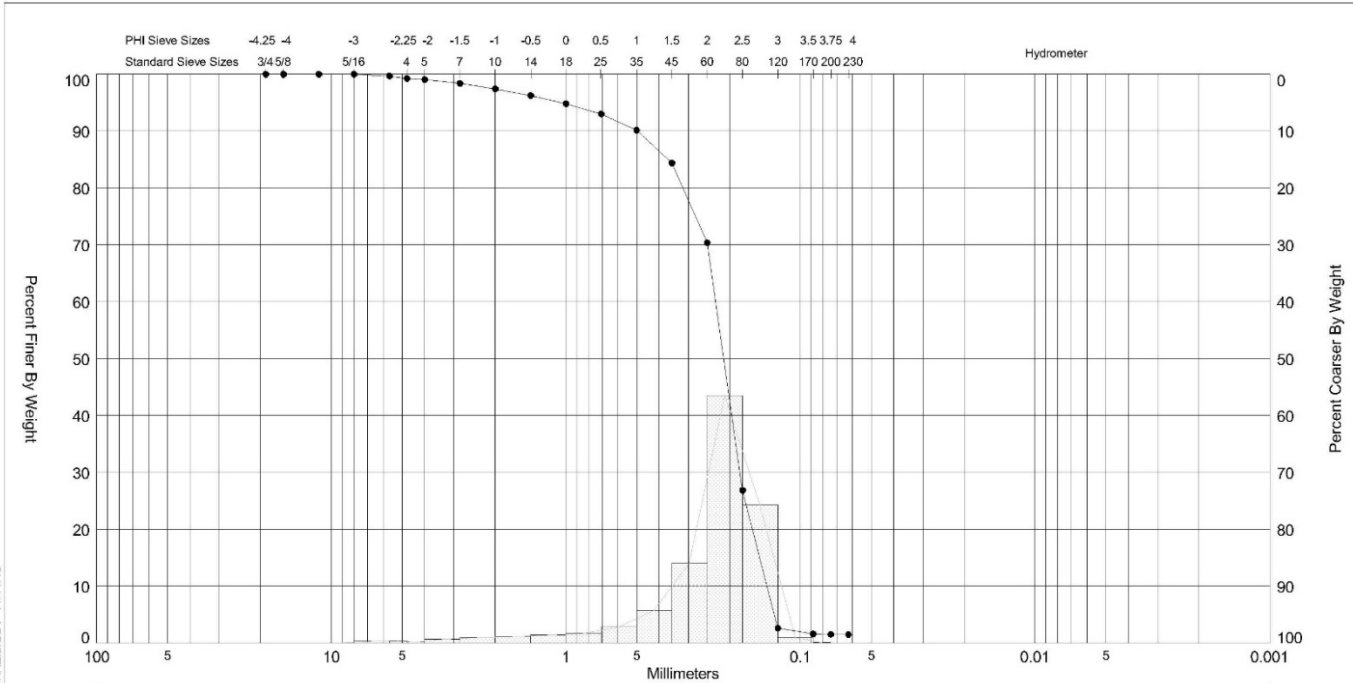
Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-05 #2	—•—	-39.4	SC	#200 - 32.43 #230 - 30.91		9	3	2.56	-2.94	11.91	1.12	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-04-15
Depths and elevations based on measured values												Analyzed By:	ST
												Easting (X, ft):	2,606,471
												Northing (Y, ft):	371,691
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102													






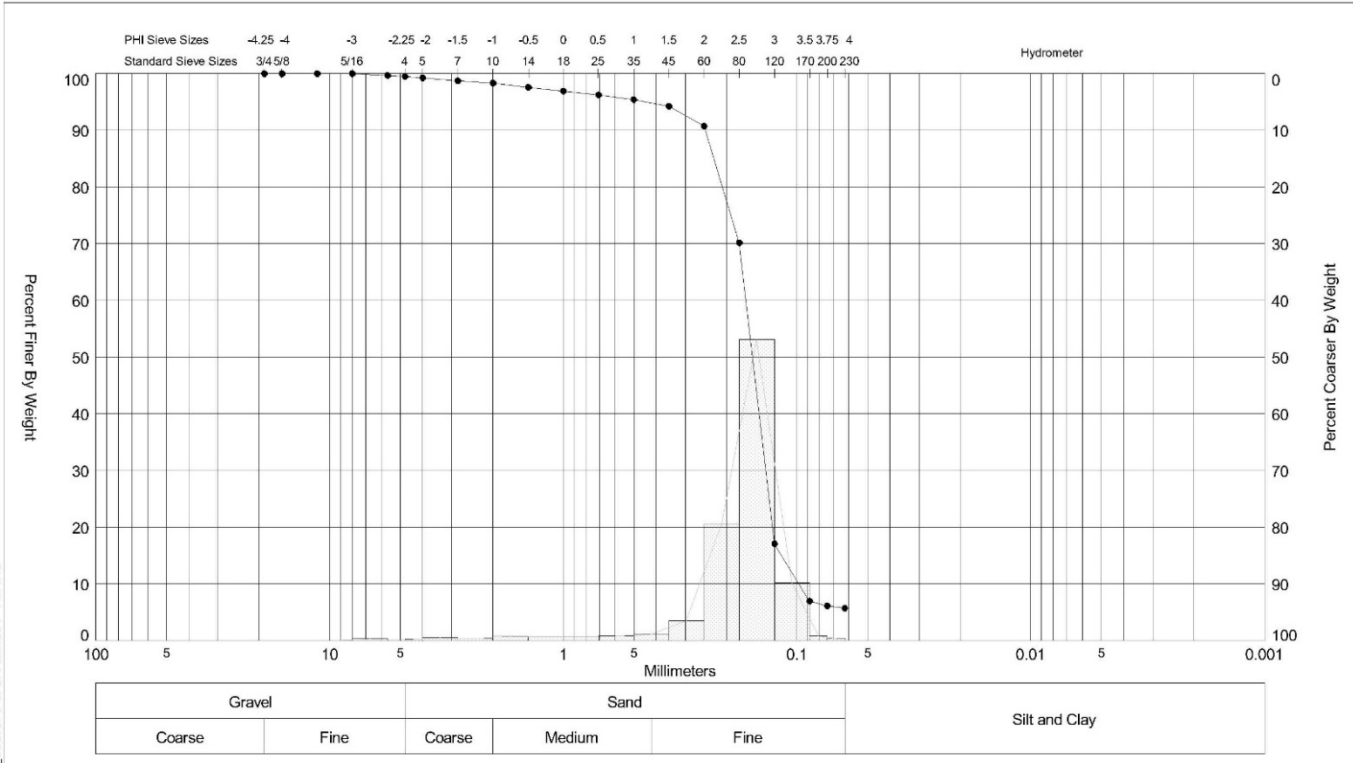
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL\_GDT 11/11/15



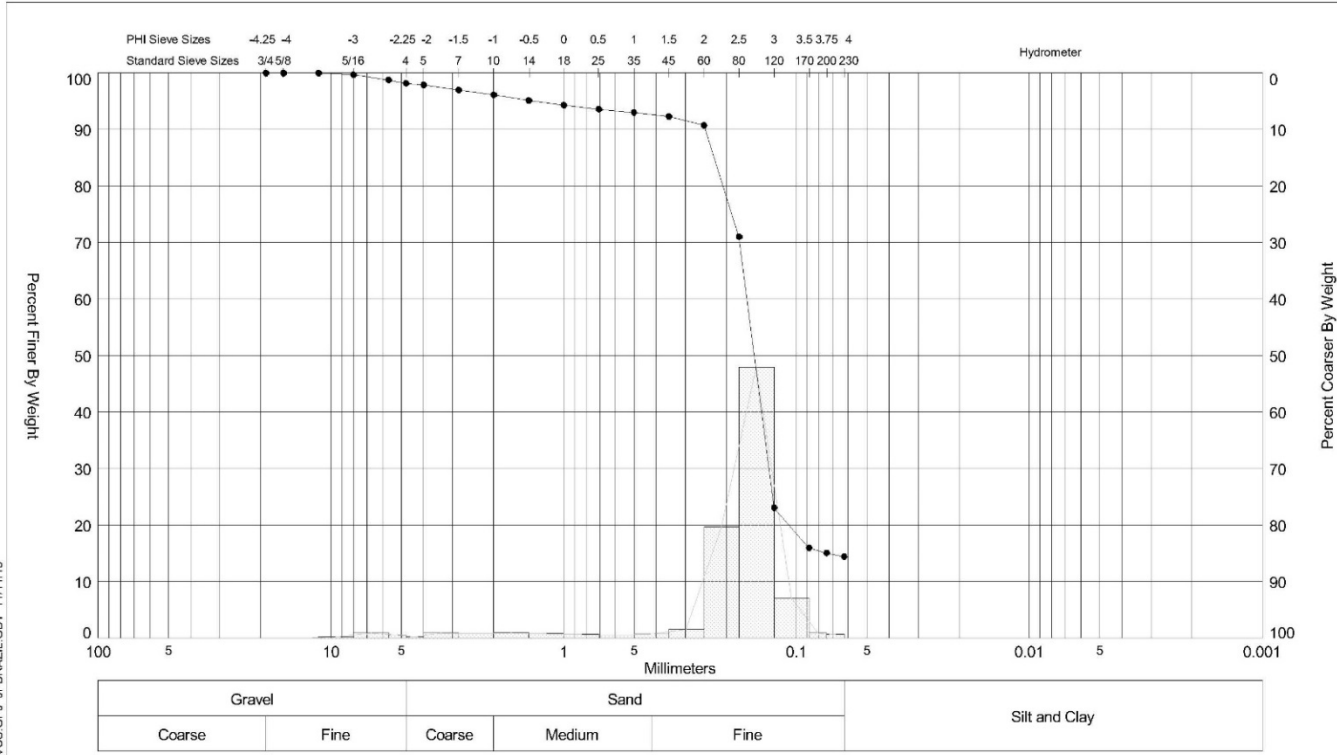
Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	


Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-07 #1	●	-29.2	SW	#200 - 1.54 #290 - 1.61		12	2.23	2	-2.41	9.84	0.94	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-05-15
Depths and elevations based on measured values												Analyzed By:	GS
 <div style="text-align: center;"> <p>CB&amp;I Coastal Planning &amp; Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102</p> </div>												Easting (X, ft):	2,606,668
												Northing (Y, ft):	372,692
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15



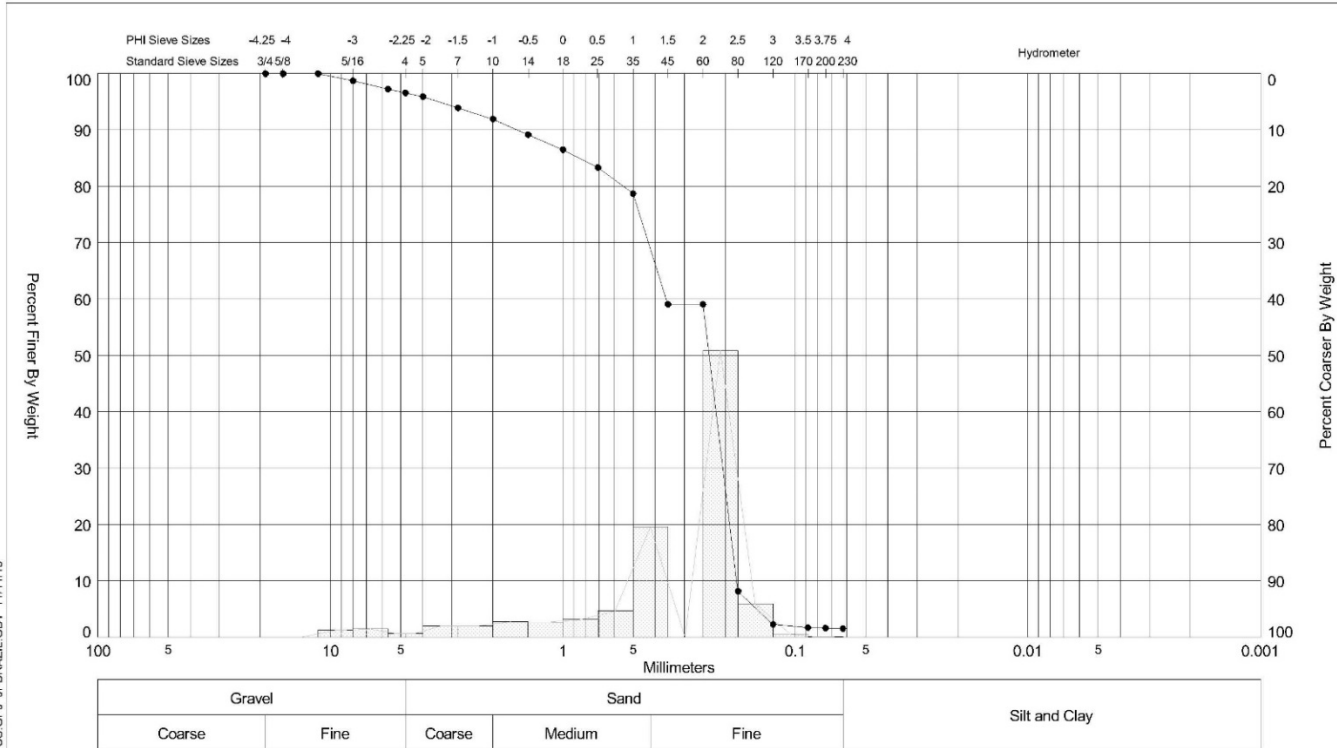
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS GPJ\_JPERAZIL.GDT 11/11/15




Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-07 #3	—●—	-33.5	SC	#200 - 15.11 #230 - 14.48		10	2.72	2.34	-2.97	11.79	1.17	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-05-15
Depths and elevations based on measured values												Analyzed By:	GS
 <div style="text-align: center;"> <p>CB&amp;I Coastal Planning &amp; Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102</p> </div>												Easting (X, ft):	2,606,668
												Northing (Y, ft):	372,692
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88



SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

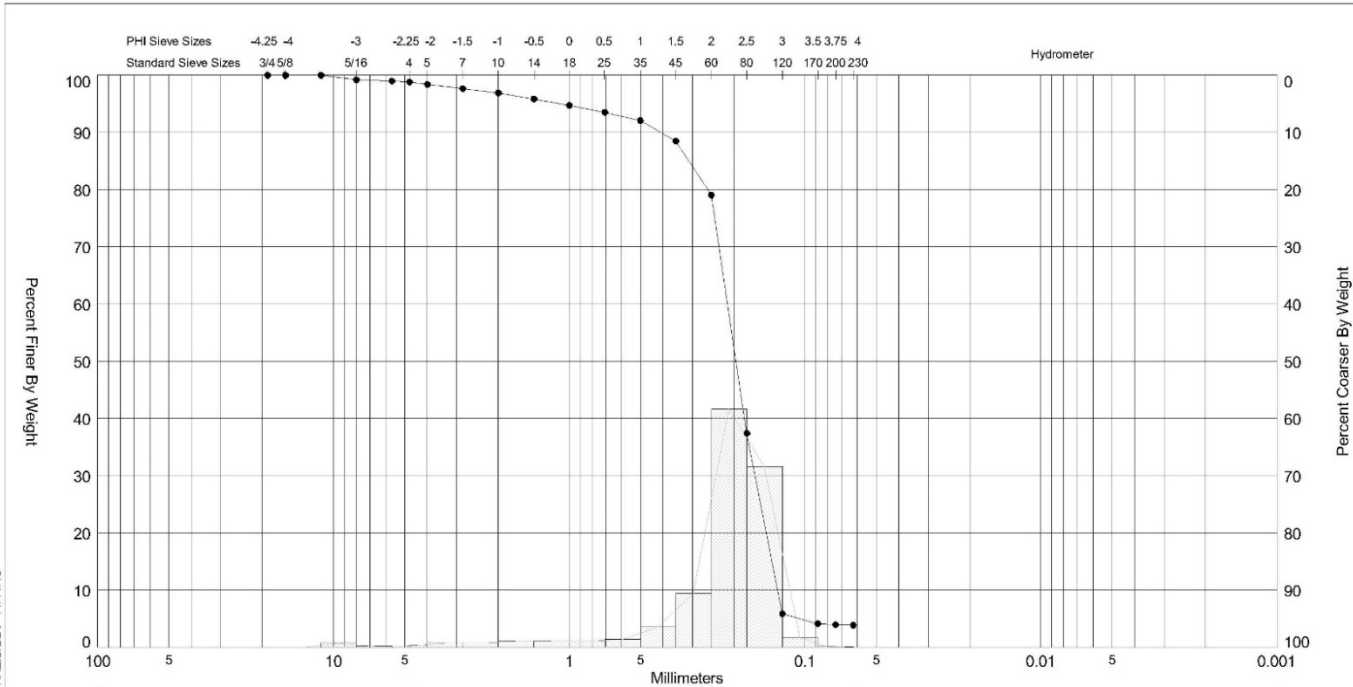


Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	


Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-08 #1	—●—	-28.3	SW	#200 - 1.66 #230 - 1.58		24	2.09	1.44	-1.69	5.33	1.36	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-04-15
Depths and elevations based on measured values												Analyzed By:	GS
												Easting (X, ft):	2,605,812
												Northing (Y, ft):	373,143
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102													



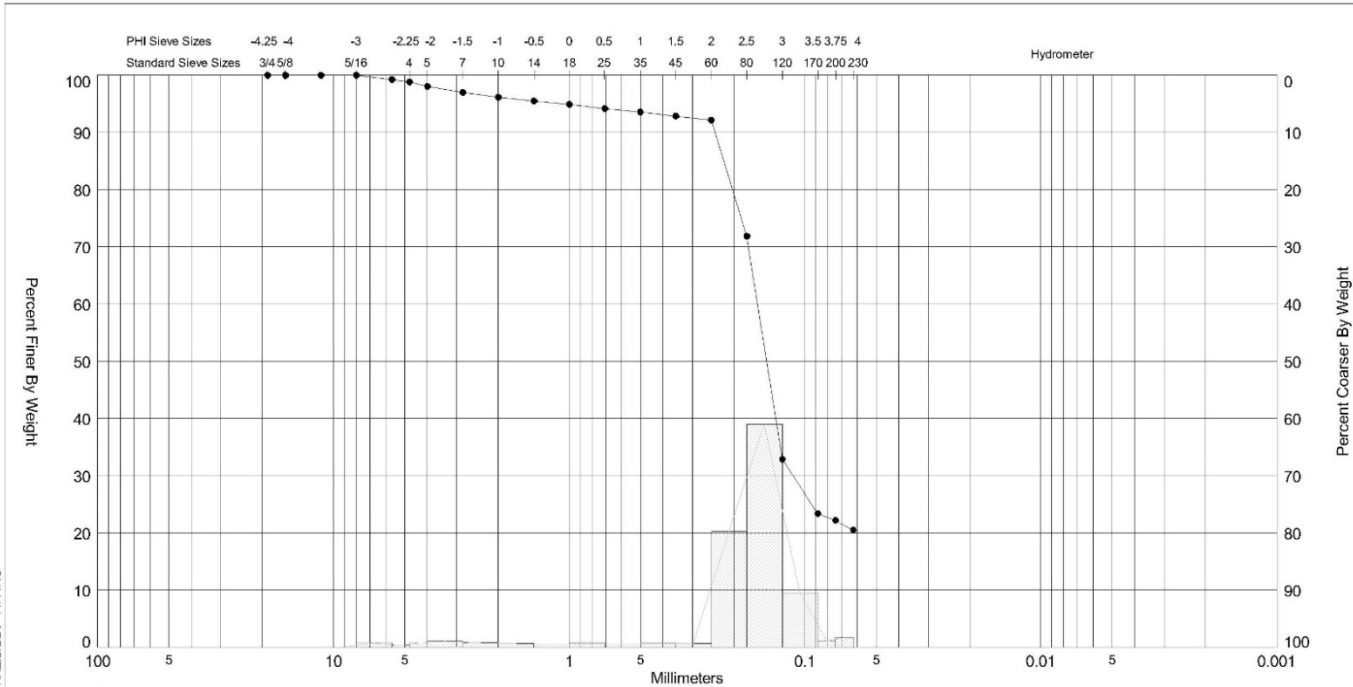
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

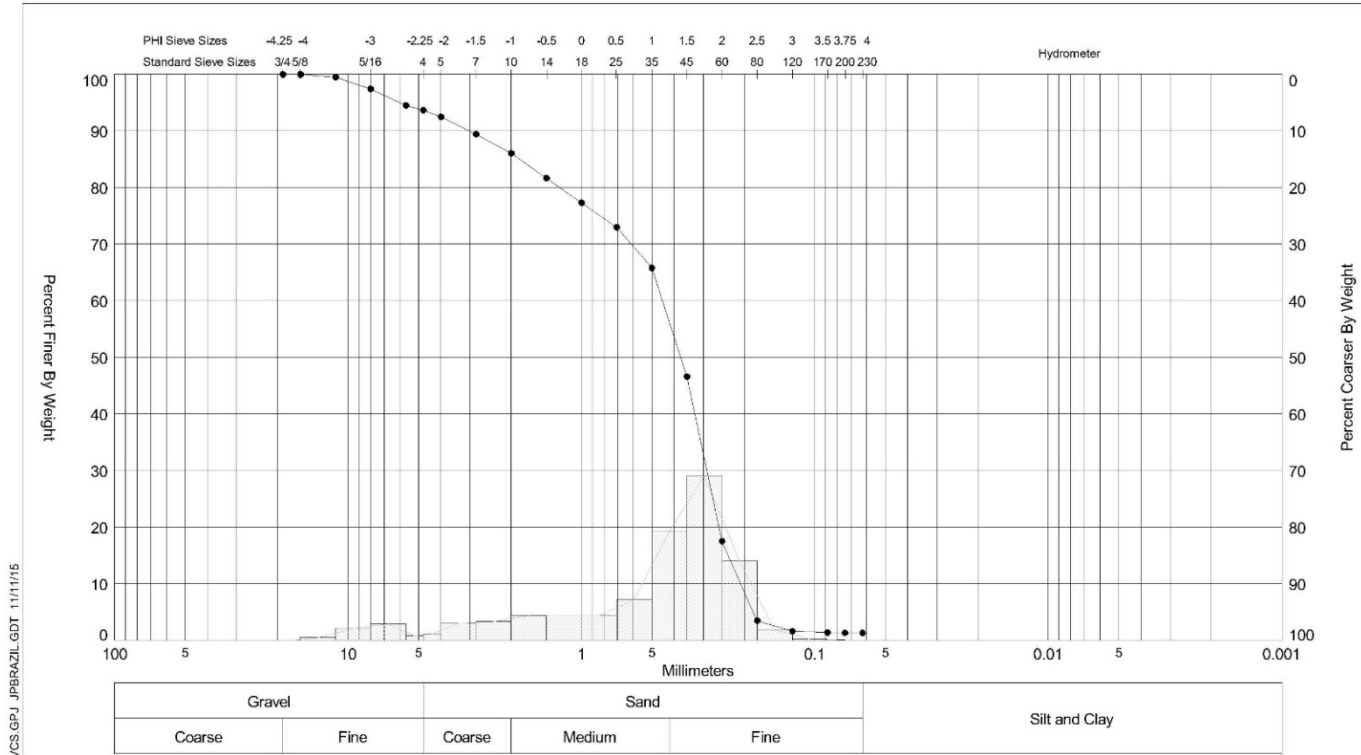


Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-08 #2	•	-31.1	SW	#200 - 3.98 #230 - 3.92		11	2.35	2.1	-2.95	12.95	1.02	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-05-15
Depths and elevations based on measured values												Analyzed By:	GS
												Easting (X, ft):	2,605,812
												Northing (Y, ft):	373,143
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102													


SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15





Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

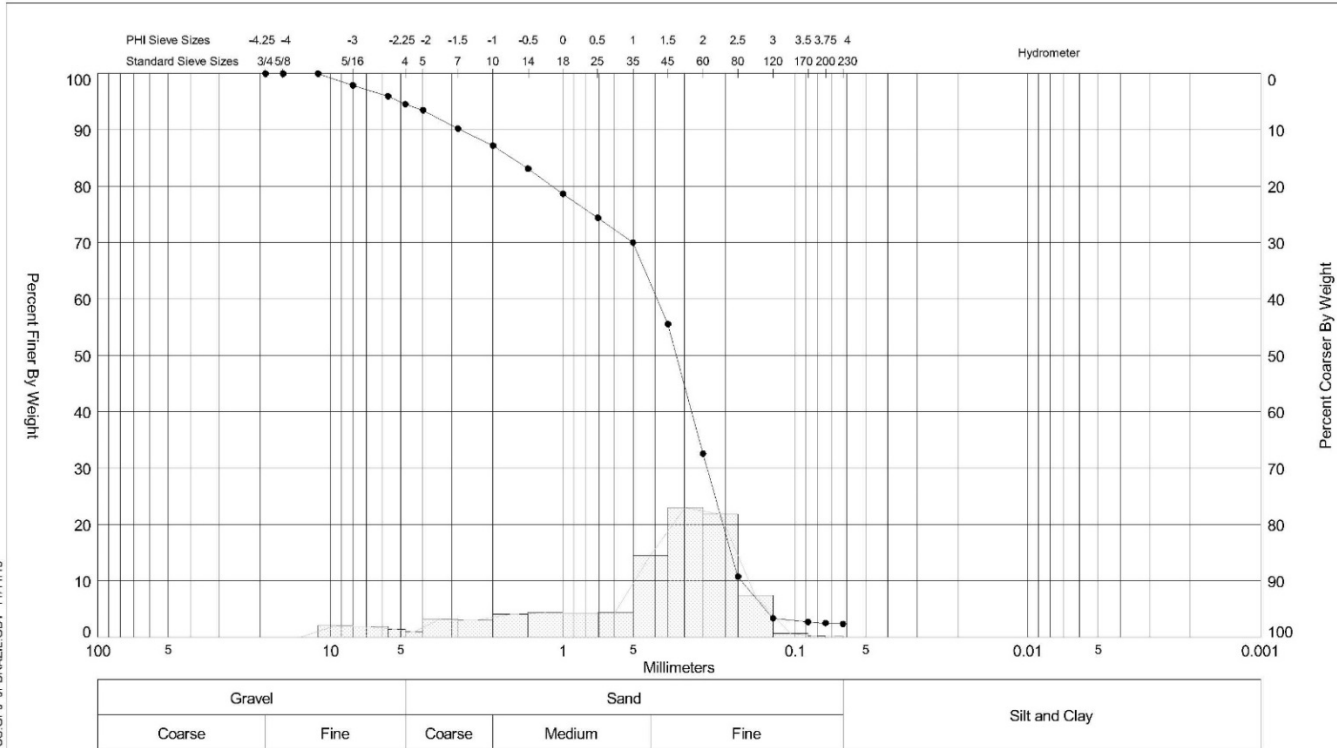
SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-09 #1	—•	-28.1	SW	#200 - 1.35 #230 - 1.34		35	1.41	0.85	-1.29	3.78	1.49	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-05-15
Depths and elevations based on measured values												Analyzed By:	GS
 <div style="text-align: center;"> <p>CB&amp;I Coastal Planning &amp; Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102</p> </div>												Easting (X, ft):	2,605,227
												Northing (Y, ft):	373,140
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88






SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15

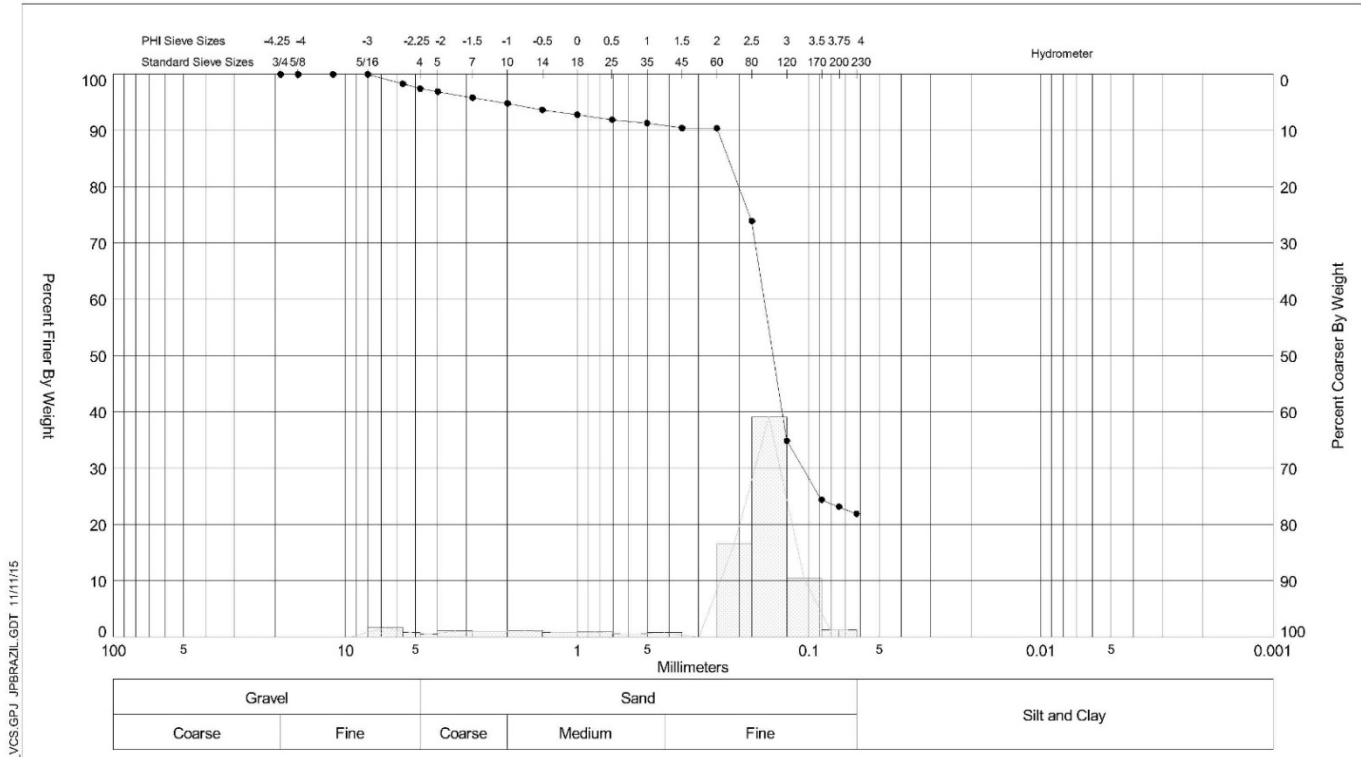



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-10 #1	—●—	-25.9	SW	#200 - 2.54 #230 - 2.38		37	1.62	1.07	-1.2	3.59	1.53	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-04-15
Depths and elevations based on measured values												Analyzed By:	ST
												Easting (X, ft):	2,604,061
												Northing (Y, ft):	373,784
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88
CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102													







Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SBVC-15-10 #3	—•	-34.9	SM	#200 - 23.18 #230 - 21.94		14	2.81	2.27	-2.43	8.19	1.38	Project Name:	BOEM Cultural Resource Investigation
Comments:												Analysis Date:	03-04-15
Depths and elevations based on measured values												Analyzed By:	GS
						CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102						Easting (X, ft):	2,604,061
												Northing (Y, ft):	373,784
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

SIEVE ANALYSIS SHIP\_SHOAL\_SABINE\_VCS.GPJ\_JPBRAZIL.GDT 11/11/15



### **Department of the Interior (DOI)**

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.



### **Bureau of Ocean Energy Management (BOEM)**

The mission of the Bureau of Ocean Energy Management is to manage development of U.S. Outer Continental Shelf energy and mineral resources in an environmentally and economically responsible way.

### **BOEM Environmental Studies Program**

The mission of the Environmental Studies Program is to provide the information needed to predict, assess, and manage impacts from offshore energy and marine mineral exploration, development, and production activities on human, marine, and coastal environments. The proposal, selection, research, review, collaboration, production, and dissemination of each of BOEM's Environmental Studies follows the DOI Code of Scientific and Scholarly Conduct, in support of a culture of scientific and professional integrity, as set out in the DOI Departmental Manual (305 DM 3).