104904

150//NV1

USGS - BAMG

NAVIGATION LOG

SHIP: ASTERIAS

CRUISE: AST95-1

AREA: LONG ISLAND SOUND

DATES: 6/6 → 6/13/95

CHIEF SCIENTIST: Poppe

NIANTIC BAY SURVEY

YrMoDy	JulDy	GMT Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950607	158	130529	1	41°16.7164'	72 7.1327	321	2.6	1	SOL Line 1
	~	1320		line broken off due to navigation errors (wrong w.p.'s)					
				equipment problems (3.5kHz dies as winch is used					
950607	158	1439	1	41°16.9128'	72 7.2957	317	4.3		SOL Line 1
		1457	1	41°17.8785'	72 8.1820				EOL Line 1
		1459	2	41°17.9464'	72°8.3416'	289	4.3		SOL 2
		1518	2	41°18.2466	72°10.1429				EOL 2
950607	158	1520	3	41°18.1676'	72°10.1611'	94	4.4		SOL 3
		1537	3	41°17.9097'	72°8.4410				EOL 3
		1538	4	41°17.8235'	72°8.3177'	144	5.2		SOL 4
		1552		41°16.8639	72°7.4104				EOL 4

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950607	158	1555	5	41°16.7948'	72°7.4580	322	3.6	1	SOL5
		1612	5	41 17.8169'	72°8.3814'				EOL5
		1614	6	41°17.8576'	72°8.5597'	278	4.7		SOL6
		1629	6	41 18.1127'	72° 10.1997'				EOL6
950607	158	1632	7	41°18.0219'	72° 10.1822°	100	4.1		SOL7
		1651	7	41°17.7657'	72°8.4598'				EOL7
		1652	8	41 17.7240'	72° 8.3848'	157	4		SOL8
		1708	8	41°16.7788'	72°7.5870'				EOL8
		1728	9	41°15.9786'	72°8.3841'	230	4.2		SOL9
		1746	9	41°17.1245'	72° 8.3873'				EOL9
		1749	10	41°17.2126'	72°8.4791'	182	4.9	1	SOL10
		1804	10	41°15.9967'	72° 8.4858'				EOL10

NIANTIC

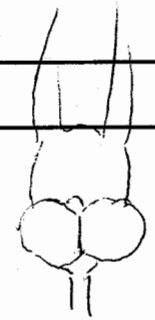
YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950607	158	1807	11	41°15.9916'	72°8.6274'	0	3.5	1	SOL11
		1836	11	41°17.8865'	72°8.6150'				
		1838	12	41°17.8583'	72°8.7138'	180			SOL12
		1901	12	41°15.9983'	72°8.7174'				EOL12
		1907	13	41°15.9496'	72°8.8278'	0			SOL13
		1934	13	41°17.8902'	72°8.8175'				EOL13
		1936	14	41°17.9113'	72°8.9058	180	4.5		SOL14
		1959	14	41°15.9896'	72°8.9262'				EOL14
		2002	15	41°15.9700'	72°9.0063	0			SOL15
		2006	15	41°16.174	72°09.014'				
		2024	15	41°16.1727	72°09.0151			Dock on Line 15	
		2038		41°17.0961	72°9.0445				EOL15 Broke off planned line 15 early due to lobster traps

NIANTIC BAY, LIS

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950607	158	2040	16	41°17.1291'	72°9.1342'	180	4	1	SOL 16
		2054	16	41 15.9927'	72°91.358'				EOL 16
	158		END OF	1st DAY	OF	SURVEYING			
950608	159	1228	17	41°16.0098	72°9.2414	0	4.3	2	SOL 17
		1249		41°17.5078'	72°9.2883				EOL 17
		1257	18	41°17.9587'	72°9.3355'	180	4.3		SOL 18
		1321	18	41°15.9936	72°9.3492				EOL 18
		1324	19	41°15.9579	72°9.4480'	0	4.5		SOL 19
		1351	19	41 17.9736	72°9.4514				EOL 19
		1353	20	41°17.9816	72°9.5456'	180	4.5		SOL 20
		1420	20	41°15.9779	72°9.5535				EOL 20
	159								

NIANTIC BAY

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950608	159	1424	21	41°16.0184	72° 9.6685	0	4.5	2	SOL 21
		1449		41°17.9670	72°9.6637				EOL 21
		1452		41°17.9383	72°9.7234	180	4.5		SOL 22
		~1510-1515	Dodging Pots						
		1521		41°15.9963	72°9.7726				EOL 22
		1525	23	41 15.9142'	72 9.8683'			2	SOL 23
		~1526	Chang Nav. disk					3	
		1553	23	41°18.0102'	72°9.8806'			3	EOL 23
		1555	24	41°17.9931'	72°9.9802	180	4.5		SOL 24
		1624		41°15.9928'	72°9.9816'				EOL 24
		1628z	25	41°16.0201	72°10.0969	0	4.5		SOL 25
		1654		41°18.0337'	72°10.0904				EOL 25



YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950608	159	1656	26	41°18.0310'	72°10.1892'	180	4.5	3	SOL 26
		1723	26	41°15.9930'	72°10.1879'				EOL 26
		1727	27	41°15.9988'	72°10.2926'	0	4.5		SOL 27
		1804	27	41°18.4056'	72°10.3327'				EOL 27
		1809	28	41°18.3068'	72°10.4011'	180	4.5	3	SOL 28
		1820-1830	Picked Up	a Drop				3	
		~1832	Changed	Navigation	Disk			4	
		1840	28	41°15.9845'	72°10.3973'			4	EOL 28
		1843	29	41°16.0086'	72°10.5198'	0	4.5		SOL 29
		1911	29	41°18.0054'	72°10.5351'				EOL 29
		1914							
		1914	30	41°17.9608'	72°10.6061'	180	4.5	4	SOL 30
		1938		41°15.9987'	72°10.6172'				EOL 30
		1940	31	41°16.0056'	72°10.7136'	0	4.5		SOL 31
		2017	31	41°18.7119'	72°10.7163'				EOL 31

NIANTIC

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950608	159	2022z	32	41°18.9175'	72°10.8262'	180	4.5	4	SOL 32
		2059		41°15.9964'	72°10.8247'				EOL 32
				END OF 2ND DAY OF SURVEYING					
950609	160	1230	33	41°16.0883'	72°10.9345'	0	4.5	5	SOL 33
		1306		41°18.9901'	72°10.9362'				EOL 33
		1308		41°18.9818'	72°11.0505'				SOL 34
		1347		41°15.9894'	72°11.0474'				EOL 34
		1350		41°15.9884'	72°11.1547'				SOL 35
		1358	Picked up a lobster pot						
		1428	Change Nav Disk					6	
		1432		41°19.1283'	72°11.1567'				EOL 35
		1433		41°19.1060'	72°11.2582'				SOL 36
		1443-1452	Nav	Nav on Disk 1511				7	
		1516		41°15.9955'	72°11.2514'				EOL 36

NIANTIC

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950609	160	1519	37	41°15.9866'	72°11.3533'	0	4.5	7	SOL 37
		1547		Picked up a pt 41°17.8398	72 11.3567'				
		1556		41°18.5458	72°11.3603'				EOL 37
		1559	38	41°18.4874	72°11.4737	180	4.5	7	SOL 38
		1612		New Nav Disk				8	
		1633		41°15.9942'	72°11.4647'				EOL 38
		1636		41°15.9942	72°11.5723	0	4.5	8	SOL 39
		1707		41°18.5048'	72°11.5759'				EOL 39
		1709		41°18.4750'	72°11.6924'	180			SOL 40
		1740		41°15.9754'	72°11.6845'				EOL 40
		1743		41°15.9392'	72°11.8031	0	4.5		SOL 41
		1811		41°18.0081'	72°11.7936'			8	EOL 41

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950109	160	1813	42	41°18.0077'	72°11.8977	180	4.5	8	SOL42
		1837		41°15.9734'	72°11.8842'				EOL42
		1840		41°15.9637'	72°12.0087'	0	4.5	8	SOL43
		1909		41°18.0042'	72°12.0048				EOL43
			Pulled First to check backtrack before next line						
		1924		41°16.9006	72°12.1442				SOL44s
		1934		41°16.0120'	72°12.1126'			8	EOL44s
		1952		41°16.8355	72°12.1068	180	4.5/5.7	9	SOL44
950109	160	2003		41°15.9744'	72°12.0984	180	5.2	9	EOL44
				END OF NIANTIC BAY SIDESCAN SURVEY					

Test of Line 44 w/o sidescan

FISHERS ISLAND SOUND

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950610	161	1136	1	41.178848	72 0.2625	090	3.5	10	SOL 1
			1245 → 1249	Picked UP A Pot					
		1306		41°17.8933'	71°51.9945				EOL 1
		1308	2	41°17.9650'	71°51.9599	090	4.7		SOL 2
			1325-1327	Picked UP A Pot					
		1450		1447 1440 41°17.9667	72° 0.3324				EOL 2
		1453		41°18.0452'	72°0.3217	090	~6.0		SOL 3
				1513 Pot (Lobster)					
		1555		41°18.0504'	71°51.9910				EOL 3
		1557		41°18.1163'	71 51.9452'	270	4		SOL 4
		1729		Changed NAV Tape/DISK				11	
		1731		41 18.1253	72° 0.3346				EOL 4
		1742		41°18.2009	72°0.3089'	090	5.7	11	SOL 5
		1839	5	41°18.1875'	71 53.5731'			12	EOL 5

New Nav Disk 1836

FISHERS ISLAND SOUND

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950610	161	1841	6	41°18.2783'	71°53.6322	270	4.5	12	SOL 6
		1859	6	41°18.2712'	71°55.5123'				EOL 6
		1907	7	41°18.2742'	71°56.2339'	270	4.5	12	SOL 7
		1917	Lobster Pot						
		1924		41°18.2709'	71 58.0137'	270			EOL 7
		1933	8	41°17.8104'	71°57.7895'	270	4.9		SOL 8
		1948	Broke off line to fix tail on sidescan fish	41°17.8104'	71°59.4909				
		1956	Back on Line	41°17.8048'	71°59.5767'				
950610	161	2003	8	41°17.8028	72°0.3330	270			EOL 8

FISHERS ISLAND SOUND

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950611	162	1129Z	9	41°17.6514'	72°0.3084'	090	3.3	13	SOL 9
		1147	9	41°17.6469'	71°58.9243'				EOL 9
		1150	10	41°17.5586'	71°58.8742'	270			SOL10
		1201	10	41°17.5647'	72°0.3359'				EOL10
		1204	11	41°17.4804'	72°0.3920'	090	4.2		SOL11
		1223		41°17.4896'	71°58.9279'				EOL11
		1231	12	41°17.3979'	71°59.6801'	270	4.7		SOL12
		1237		41°17.3999'	72°0.3275'				EOL12
		1243		41°17.7158'	72°0.4073'	090	3.8		SOL13
		1323		41°17.7164'	71°56.5117'				
		1326		41°17.6550'	71°56.4783'	270			SOL14
		1343		41°17.6504'	71°58.2147'				EOL14

lots of LOBSTER POTS

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950611	162	1345	15	41°17.5616'	71°57.9373'	090	4.8	13	SOL15
		1347	Rolled VP & Pot						
		1353		41°17.5644	71°56.5885				EOL15
		1402	11	41°17.4844'	71°56.6363	270	4.1		SOL16
		1413		41 17.4160	71°57.6907				EOL16
		1415		41 17.4021'	71 57.7335'	090	5.2		SOL17
		1429		41 17.3987'	71 56.7193				
		1426		41 17.3114'	71°56.6977'	270			SOL18
		1440		41°17.3193	71°58.0168'				EOL18
		1448		41°17.8112	71°57.3838'	090	5.7		SOL19
		1506		41°17.8043	71°55.9973				EOL19
		1525		41°18.3547'	71°58.0209	090	6.4		SOL20
		1558		41°18.3594'	71°53.8199				EOL20

YrMoDy	JulDy	Time+Zone	Line#	Latitude N	Longitude W	Course	Speed	Disk#	Comments
950611	162	1600	21	4118.4155	71°53.8728'	270	3.9	13	SOL 21
		1651		41°18.4349	71 58.0255				EOL21
				NEW NAV DISK			1642		
		1653	22	41°18.5141'	71°57.9430'	090		14	SOL 22
		1721	22	41°18.5185'	71°54.3741'				EOL 22
		1727		41°18.5875'	71°54.6917'	270		14	SOL 23
		1734		41°18.5894'	71°55.4350				EOL 23
		1740		41°18.5954'	71°55.8429	270			SOL 24
		1749		41°18.5867'	71°56.6477				EOL 24
		1756		41°18.5911	71°57.2255	270		14	SOL 25
950611	162	1804	25	41°18.5929'	71°58.0472'			14	EOL 25
			END OF FISNERS						
			ISLAND SOUND 100 KHZ SURVEY						

NIANTIC BAY 100KHZ SIDESCAN SONAR SURVEY

41d16.930'	-72d7.345'	WP1
41d17.900'	-72d8.200'	WP2
# -b		
41d17.990'	-72d8.405'	WP3
41d18.264'	-72d10.185'	WP4
# -b		
41d18.180'	-72d10.185'	WP5
41d17.910'	-72d8.425'	WP6
# -b		
41d17.850'	-72d8.285'	WP7
41d16.880'	-72d7.430'	WP8
# -b		
41d16.836'	-72d7.510'	WP9
41d17.807'	-72d8.365'	WP10
# -b		
41d17.840'	-72d8.450'	WP11
41d18.105'	-72d10.185'	WP12
# -b		
41d18.024'	-72d10.185'	WP13
41d17.765'	-72d8.470'	WP14
# -b		
41d17.760'	-72d8.450'	WP15
41d16.785'	-72d7.595'	WP16
# -b		
41d16.000'	-72d8.380'	WP17
41d17.210'	-72d8.380'	WP18
# -b		
41d17.360'	-72d8.495'	WP19
41d16.000'	-72d8.495'	WP20
# -b		
41d16.000'	-72d8.610'	WP21
41d18.000'	-72d8.610'	WP22
# -b		
41d18.000'	-72d8.715'	WP23
41d16.000'	-72d8.715'	WP24
# -b		
41d16.000'	-72d8.815'	WP25
41d18.000'	-72d8.815'	WP26
# -b		
41d18.000'	-72d8.912'	WP27
41d16.000'	-72d8.912'	WP28
# -b		
41d16.000'	-72d9.025'	WP29
41d17.620'	-72d9.025'	WP30
# -b		
41d17.250'	-72d9.137'	WP31
41d16.000'	-72d9.137'	WP32
# -b		
41d16.000'	-72d9.242'	WP33
41d17.495'	-72d9.242'	WP34
# -b		
41d18.000'	-72d9.347'	WP35
41d16.000'	-72d9.347'	WP36
# -b		
41d16.000'	-72d9.450'	WP37
41d18.000'	-72d9.450'	WP38
# -b		
41d18.000'	-72d9.553'	WP39
41d16.000'	-72d9.553'	WP40
# -b		
41d16.000'	-72d9.665'	WP41

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41d18.000'      -72d9.665'      WP42
#,-b
41d18.000'      -72d9.775'      WP43
41d16.000'      -72d9.775'      WP44
# -b
41d16.000'      -72d9.875'      WP45
41d18.000'      -72d9.875'      WP46
# -b
41d18.000'      -72d9.980'      WP47
41d16.000'      -72d9.980'      WP48
# -b
41d16.000'      -72d10.083'     WP49
41d18.000'      -72d10.083'     WP50
# -b
41d18.375'      -72d10.185'     WP51
41d16.000'      -72d10.185'     WP52
# -b
41d16.000'      -72d10.295'     WP53
41d18.375'      -72d10.295'     WP54
# -b
41d18.375'      -72d10.405'     WP55
41d16.000'      -72d10.405'     WP56
# -b
41d16.000'      -72d10.513'     WP57
41d18.680'      -72d10.513'     WP58
# -b
41d18.680'      -72d10.615'     WP59
41d16.000'      -72d10.615'     WP60
# -b
41d16.000'      -72d10.715'     WP61
41d18.680'      -72d10.715'     WP62
# -b
41d18.945'      -72d10.825'     WP63
41d16.000'      -72d10.825'     WP64
# -b
41d16.000'      -72d10.935'     WP65
41d18.985'      -72d10.935'     WP66
# -b
41d19.045'      -72d11.045'     WP67
41d16.000'      -72d11.045'     WP68
# -b
41d16.000'      -72d11.155'     WP69
41d19.105'      -72d11.155'     WP70
# -b
41d19.105'      -72d11.255'     WP71
41d16.000'      -72d11.255'     WP72
# -b
41d16.000'      -72d11.356'     WP73
41d18.925'      -72d11.356'     WP74
# -b
41d18.870'      -72d11.467'     WP75
41d16.000'      -72d11.467'     WP76
# -b
41d16.000'      -72d11.578'     WP77
41d18.870'      -72d11.578'     WP78
# -b
41d18.870'      -72d11.685'     WP79
41d16.000'      -72d11.685'     WP80
# -b
41d16.000'      -72d11.795'     WP81
41d18.060'      -72d11.795'     WP82
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41d18.000'      -72d9.665'      WP42
#,-b
41d18.000'      -72d9.775'      WP43
41d16.000'      -72d9.775'      WP44
# -b
41d16.000'      -72d9.875'      WP45
41d18.000'      -72d9.875'      WP46
# -b
41d18.000'      -72d9.980'      WP47
41d16.000'      -72d9.980'      WP48
# -b
41d16.000'      -72d10.083'     WP49
41d18.000'      -72d10.083'     WP50
# -b
41d18.375'      -72d10.185'     WP51
41d16.000'      -72d10.185'     WP52
# -b
41d16.000'      -72d10.295'     WP53
41d18.375'      -72d10.295'     WP54
# -b
41d18.375'      -72d10.405'     WP55
41d16.000'      -72d10.405'     WP56
# -b
41d16.000'      -72d10.513'     WP57
41d18.680'      -72d10.513'     WP58
# -b
41d18.680'      -72d10.615'     WP59
41d16.000'      -72d10.615'     WP60
# -b
41d16.000'      -72d10.715'     WP61
41d18.680'      -72d10.715'     WP62
# -b
41d18.945'      -72d10.825'     WP63
41d16.000'      -72d10.825'     WP64
# -b
41d16.000'      -72d10.935'     WP65
41d18.985'      -72d10.935'     WP66
# -b
41d19.045'      -72d11.045'     WP67
41d16.000'      -72d11.045'     WP68
# -b
41d16.000'      -72d11.155'     WP69
41d19.105'      -72d11.155'     WP70
# -b
41d19.105'      -72d11.255'     WP71
41d16.000'      -72d11.255'     WP72
# -b
41d16.000'      -72d11.356'     WP73
41d18.925'      -72d11.356'     WP74
# -b
41d18.870'      -72d11.467'     WP75
41d16.000'      -72d11.467'     WP76
# -b
41d16.000'      -72d11.578'     WP77
41d18.870'      -72d11.578'     WP78
# -b
41d18.870'      -72d11.685'     WP79
41d16.000'      -72d11.685'     WP80
# -b
41d16.000'      -72d11.795'     WP81
41d18.060'      -72d11.795'     WP82
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# -b
41d18.060'      -72d11.895'     WP83
41d16.000'      -72d11.895'     WP84
# -b
41d16.000'      -72d12.000'     WP85
41d18.060'      -72d12.000'     WP86
# -b
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FISHERS ISLAND SOUND

100kHz Sidescan Sonar Survey

Trackline Navigation

41d17.891'	-72d0.320'	WP1
41d17.891'	-71d52.00'	WP2
# -b		
41d17.805'	-71d52.00'	WP3
41d17.805'	-71d54.18'	WP4
# -b		
41d17.723'	-71d54.18'	WP5
41d17.723'	-71d53.02'	WP6
# -b		
41d17.650'	-71d53.02'	WP7
41d17.650'	-71d54.18'	WP8
# -b		
41d17.970'	-71d52.00'	WP9
41d17.970'	-72d0.320'	WP10
# -b		
41d18.045'	-72d0.320'	WP11
41d18.045'	-71d52.00'	WP12
# -b		
41d18.198'	-71d52.00'	WP13
41d18.198'	-71d52.55'	WP14
# -b		
41d18.276'	-71d52.55'	WP15
41d18.276'	-71d52.00'	WP16
# -b		
41d18.125'	-71d52.00'	WP17
41d18.125'	-72d0.320'	WP18
# -b		
41d18.198'	-72d0.320'	WP19
41d18.198'	-71d53.57'	WP20
# -b		
41d18.276'	-71d53.57'	WP21
41d18.276'	-71d55.40'	WP22
# -b		
41d18.276'	-71d56.21'	WP23
41d18.276'	-71d58.00'	WP24
# -b		
41d18.355'	-71d58.00'	WP25
41d18.355'	-71d53.57'	WP26
# -b		
41d18.432'	-71d54.00'	WP27
41d18.432'	-71d58.00'	WP28
# -b		
41d18.507'	-71d58.00'	WP29
41d18.507'	-71d54.00'	WP30
# -b		
41d18.587'	-71d54.73'	WP31
41d18.587'	-71d55.40'	WP32

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# -b
41d18.587'      -71d55.87'      WP33
41d18.587'      -71d56.64'      WP34
# -b
41d18.665'      -71d56.64'      WP35
41d18.665'      -71d54.73'      WP36
# -b
41d18.744'      -71d54.73'      WP37
41d18.744'      -71d56.64'      WP38
# -b
41d18.665'      -71d57.26'      WP39
41d18.665'      -71d58.00'      WP40
# -b
41d18.587'      -71d58.00'      WP41
41d18.587'      -71d57.26'      WP42
# -b
41d17.805'      -71d57.35'      WP43
41d17.805'      -71d56.00'      WP44
# -b
41d17.723'      -71d56.53'      WP45
41d17.723'      -72d0.320'      WP46
# -b
41d17.805'      -72d0.320'      WP47
41d17.805'      -71d57.90'      WP48
# -b
41d17.650'      -71d58.20'      WP49
41d17.650'      -71d56.53'      WP50
# -b
41d17.562'      -71d56.63'      WP51
41d17.562'      -71d58.20'      WP52
# -b
41d17.484'      -71d58.20'      WP53
41d17.484'      -71d56.63'      WP54
# -b
41d17.400'      -71d56.73'      WP55
41d17.400'      -71d58.00'      WP56
# -b
41d17.322'      -71d58.00'      WP57
41d17.322'      -71d56.83'      WP58
# -b
41d17.650'      -71d58.94'      WP59
41d17.650'      -72d0.320'      WP60
# -b
41d17.562'      -72d0.320'      WP61
41d17.562'      -71d58.94'      WP62
# -b
41d17.484'      -71d58.94'      WP63
41d17.484'      -72d0.320'      WP64
# -b
41d17.396'      -72d0.320'      WP65
41d17.396'      -71d59.68'      WP66
# -b
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FISHERS ISLAND SOUND 100KHZ SIDESCAN SONAR SURVEY

41d17.891'	-72d0.320'	WP1
41d17.891'	-71d52.00'	WP2
41d17.805'	-71d52.00'	WP3
41d17.805'	-71d54.18'	WP4
41d17.723'	-71d54.18'	WP5
41d17.723'	-71d53.02'	WP6
41d17.65'	-71d53.02'	WP7
41d17.65'	-71d54.18'	WP8
41d17.970'	-71d52.00'	WP9
41d17.970'	-72d0.320'	WP10
41d18.045'	-72d0.320'	WP11
41d18.045'	-71d52.0'	WP12
41d18.198'	-71d52.0'	WP13
41d18.198'	-71d52.55'	WP14
41d18.276'	-71d52.55'	WP15
41d18.276'	-71d52.00'	WP16
41d18.125'	-71d52.00'	WP17
41d18.125'	-72d0.320'	WP18
41d18.198'	-72d0.320'	WP19
41d18.198'	-71d53.57'	WP20
41d18.276'	-71d53.57'	WP21
41d18.276'	-71d55.40'	WP22
41d18.276'	-71d56.21'	WP23
41d18.276'	-71d58.00'	WP24
41d18.355'	-71d58.00'	WP25
41d18.355'	-71d53.57'	WP26
41d18.432'	-71d54.00'	WP27
41d18.432'	-71d58.00'	WP28
41d18.507'	-71d58.00'	WP29
41d18.507'	-71d54.00'	WP30
41d18.587'	-71d54.73'	WP31
41d18.587'	-71d55.40'	WP32
41d18.587'	-71d55.87'	WP33
41d18.587'	-71d56.64'	WP34
41d18.665'	-71d56.64'	WP35
41d18.665'	-71d54.73'	WP36
41d18.744'	-71d54.73'	WP37
41d18.744'	-71d56.64'	WP38
41d18.665'	-71d57.26'	WP39
41d18.665'	-71d58.00'	WP40
41d18.587'	-71d58.00'	WP41
41d18.587'	-71d57.26'	WP42
41d17.805'	-71d57.35'	WP43
41d17.805'	-71d56.00'	WP44
41d17.723'	-71d56.53'	WP45
41d17.723'	-72d0.320'	WP46
41d17.805'	-72d0.320'	WP47
41d17.805'	-71d57.90'	WP48
41d17.650'	-71d58.20'	WP49
41d17.650'	-71d56.53'	WP50
41d17.562'	-71d56.63'	WP51
41d17.562'	-71d58.20'	WP52
41d17.484'	-71d58.20'	WP53
41d17.484'	-71d56.63'	WP54
41d17.400'	-71d56.73'	WP55
41d17.400'	-71d58.00'	WP56
41d17.322'	-71d58.00'	WP57
41d17.322'	-71d56.83'	WP58
41d17.650'	-71d58.94'	WP59
41d17.650'	-72d0.32'	WP60
41d17.562'	-72d0.32'	WP61

41d17.562'	-71d58.94'	WP62
41d17.484'	-71d58.94'	WP63
41d17.484'	-72d0.320'	WP64
41d17.396'	-72d0.320'	WP65
41d17.396'	-71d59.68'	WP66