

DEPLOYMENT RECORD

Project Name: Victoria Sill Start Date: Apr 2008 End Date: Sep 2008
 Mooring Name: AS04-J Station Name: AS04

Geog. Desc.: Constance Bank Tide: +2 m Becker Bay.
 Latitude: 48° 18.036' Longitude: 123° 22.515'
 Water Depth: 113 m datum Ice Thickness:
 Magnetic decl: Time Zone: Anchor Type: 2 wheels + 400lbs
 Date: May 2, 2008 Time Anchor Dropped: 1421 PDT Date: Charn = 1460lbs
 Remarks:

RECOVERY RECORD

Date: Nov 15, 2008 Time Anchor Released: 0800 PDT
 Remarks: - recovered without incident
- some light (sport) fishing line entangled

INSTRUMENTS (Start at TOP)

Type	Serial #	Depth	Time in	Time Out	Notes
Witt 300	8943	105m	1420 PDT		Alum case / plastic External
SBE 37	5309	107m			Pump
Northek	2650				

Argos = 7363

Rng

Release	Serial	R Code	Arm Code	Freq	On/Off	B0	B1	Aux Codes
AR861	732	1655	16B2	16B2				
Finger 1	Type	Serial	Finger 2	Type	Serial	Battery Volt		
Helle	1/4x27	1442	—	—	—	18.9		

FLOTATION

Type	Serial #	Size	Colour
8 Viny Frame			Orange
SS37	2589	37"	Yellow.

Type	Serial #	Size	Colour

Data Entry by:

PlanADCP (Advanced) : [Dpl1]

BackToSC Settings View Help

Basic Advanced Expert

Environmental Setup:

Transducer Depth: m

Salinity: ppt

Magnetic Variation: °

Temperature: °C

Profiling Setup:

Pings Per Ensemble:

Number of Depth Cells:

Depth Cell Size: m

Mode:

Deployment Consequences

First Cell Range: m

Last Cell Range: m

Max Range: m

Standard Deviation: cm/s

Ensemble Size: bytes

Storage Required: MB

Power Usage: Wh

Battery Pack Usage:

Deployment Timing Setup:

Duration: days

Ensemble Interval:

Ping Int. (☒ Auto):

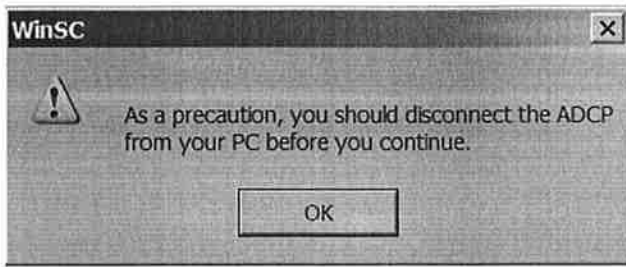
☐ Ping Immediately After Deployment

First Ping Date and Time:

Notes

8943
AS04-I
START: May 3, 2008 @ 0000UTC
Aluminum Housing, and plastic external pack. LP

CR1
CF11101
EA0
EB0
ED1110
ES34
EX11111
EZ1111111
WA50
WB0
WD111100000
WF176
WN30
WP60
WS400
WV175
TE00:10:00.00
TP00:10.00
TF08/05/03 00:00:00
CK
CS



>>>>> Function starting 05/02/08 20:14:21 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
RD Instruments (c) 1996-2005
All Rights Reserved.
>TS080502201424
>CZ

Powering Down

>>>>> Function starting 05/02/08 20:14:28 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>DEPLOY?
Deployment Commands:
RE ----- Recorder ErAsE
RN ----- Set Deployment Name

WD = 111 100 000 ----- Data Out (Vel,Cor,Amp; PG,St,P0; P1,P2,P3)
WF = 0176 ----- Blank After Transmit (cm)
WN = 030 ----- Number of depth cells (1-128)
WP = 00040 ----- Pings per Ensemble (0-16384)
WS = 0400 ----- Depth Cell Size (cm)
WV = 175 ----- Mode 1 Ambiguity Vel (cm/s radial)

TE = 00:00:30.00 ----- Time per Ensemble (hrs:min:sec.sec/100)
TF = **/**/**, **: **: -- Time of First Ping (yr/mon/day, hour:min:sec)
TP = 00:00.75 ----- Time per Ping (min:sec.sec/100)
TS = 08/05/02,20:14:31 --- Time Set (yr/mon/day, hour:min:sec)

EA = +00000 ----- Heading Alignment (1/100 deg)
EB = +00000 ----- Heading Bias (1/100 deg)
ED = 00850 ----- Transducer Depth (0 - 65535 dm)
ES = 33 ----- Salinity (0-40 pp thousand)
EX = 11111 ----- Coord Transform (Xform: Type,Tilts,3 Bm,Map)
EZ = 1111111 ----- Sensor Source (C,D,H,P,R,S,T)

CF = 11101 ----- Flow Ctrl (EnsCyc;PngCyc;Binry;Ser;Rec)
CK ----- Keep Parameters as USER Defaults
CR # ----- Retrieve Parameters (0 = USER, 1 = FACTORY)
CS ----- Start Deployment

>SYSTEM?

System Control, Data Recovery and Testing Commands:

AC ----- Output Active Fluxgate & Tilt Calibration data
AF ----- Field calibrate to remove hard/soft iron error
AR ----- Restore factory fluxgate calibration data
AX ----- Examine compass performance
AZ ----- Zero pressure reading

CB = 811 ----- Serial Port Control (Baud; Par; Stop)
CP # ----- Polled Mode (0 = NORMAL, 1 = POLLED)
CZ ----- Power Down Instrument

FC ----- Clear Fault Log
FD ----- Display Fault Log

OL ----- Display Features List

PA ----- Pre-Deployment Tests
PC1 ----- Beam Continuity
PC2 ----- Sensor Data
PS0 ----- System Configuration
PS3 ----- Transformation Matrices

RR ----- Recorder Directory
RF ----- Recorder Space used/free (bytes)
RY ----- Upload Recorder Files to Host

>TS?

TS = 08/05/02,20:14:33 --- Time Set (yr/mon/day,hour:min:sec)

>PS0

Instrument S/N: 8943

Frequency: 307200 HZ

Configuration: 4 BEAM, JANUS

Match Layer: 10

Beam Angle: 20 DEGREES

Beam Pattern: CONVEX

Orientation: UP

Sensor(s): HEADING TILT 1 TILT 2 DEPTH TEMPERATURE PRESSURE

Pressure Sens Coefficients:

c3 = +1.952969E-85

c2 = +5.688914E-08

c1 = +1.251074E-01

Offset = -2.416537E+01

Temp Sens Offset: -0.19 degrees C

CPU Firmware: 16.28 [0]

Boot Code Ver: Required: 1.13 Actual: 1.13

DEM0D #1 Ver: ad48, Type: 1f

DEM0D #2 Ver: ad48, Type: 1f

PWRTIMG Ver: 85d3, Type: 4

Board Serial Number Data:

15 00 00 00 93 A0 32 09 DSP727-2001-04G

B4 00 00 00 82 B8 DE 09 REC727-1000-04E

A7 00 00 00 93 B8 75 09 PIO727-3000-00C

6F 00 00 00 93 B0 07 09 CPU727-2000-00J
>PA

PRE-DEPLOYMENT TESTS

CPU TESTS:

RTC.....PASS
RAM.....PASS
ROM.....PASS

RECORDER TESTS:

PC Card #0.....DETECTED
Card Detect.....PASS
Communication.....PASS
DOS Structure.....PASS
Sector Test (short).....PASS
PC Card #1.....DETECTED
Card Detect.....PASS
Communication.....PASS
DOS Structure.....PASS
Sector Test (short).....PASS

DSP TESTS:

Timing RAM.....PASS
Demod RAM.....PASS
Demod REG.....PASS
FIFOs.....PASS

SYSTEM TESTS:

XILINX Interrupts... IRQ3 IRQ3 IRQ3 ...PASS
Wide Bandwidth.....PASS
Narrow Bandwidth.....PASS
RSSI Filter.....PASS
Transmit.....PASS

SENSOR TESTS:

H/W Operation.....***FAIL***

>PC2

Press any key to quit sensor display ...

All Sensors are Internal Only.

Heading	Pitch	Roll	Up/Down	Attitude Temp	Ambient Temp	PRESSURE
46.94°	-26.21°	25.13°	Up	16.97°C	14.79°C	-3.1 kPa

>RS

RS = 001,1035 ----- REC SPACE USED (MB), FREE (MB)

>PC1

BEAM CONTINUITY TEST

When prompted to do so, vigorously rub the selected beam's face.

If a beam does not PASS the test, send any character to the ADCP to automatically select the next beam.

Collecting Statistical Data...

43 41 43 46

Rub Beam 1 = PASS
Rub Beam 2 = PASS
Rub Beam 3 = PASS
Rub Beam 4 = PASS

>CZ

Powering Down

>>>>> Function starting 05/02/08 20:15:35 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>AZ

Pressure Offset Updated in NVRAM.

>CZ

Powering Down

>>>>> Function starting 05/02/08 20:15:43 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>RE ErAsE erasing...

Recorder erased.

>CZ

Powering Down

>>>>> Function starting 05/02/08 20:16:24 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>RR

Recorder Directory:

Volume serial number for device #0 is a4ae-2016

No files found.

Bytes used on device #0 = 0

Volume serial number for device #1 is c497-71b7

No files found.

Bytes used on device #1 = 0

Total capacity = 1086271488 bytes

Total bytes used = 0 bytes in 0 files

Total bytes free = 1086271488 bytes

>

[BREAK Wakeup A]

WorkHorse Broadband ADCP Version 16.28

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>CR1

[Parameters set to FACTORY defaults]

>CF11101

>EA0

>EB0

>ED1110

>ES34

>EX11111

>EZ11111111

>WA50

>WB0

>WD111100000

>WF176

>WN30

>WP60

>WS400

>WV175

>TE00:10:00.00

>TP00:10.00

>TF08/05/03 00:00:00

>CK

[Parameters saved as USER defaults]

>The command CS is not allowed in this command file. It has been ignored.

>The following commands are generated by this program:

>CF?

CF = 11101 ----- Flow Ctrl (EnsCyc;PngCyc;Binry;Ser;Rec)

>CF11101

>RN AS04J

>cs

Mooring: AS04-J
UCats x 1
5309 (PUMPED)

Battery Calculations:

Sampling Time:
 $3.33s + (2.27 * (NAV G - 1))$
 $3.33s + (2.27 * (4 - 1)) = 10.14s$

Example 1: A standard MicroCAT (no external power option) with pressure sensor is set up to sample autonomously every 10 minutes (6 samples/hour), taking 4 measurement per sample (**NAV G=4**). How long can it be deployed?

Sampling time = 3.33 seconds + 2.27 seconds * (**NAV G** - 1) = 10.14 seconds

Sampling current consumption = 0.020 amps * 10.14 seconds = 0.2 amp-seconds/sample

In 1 hour, sampling current consumption = 6 * 0.2 amp-seconds/sample = 1.2 amp-seconds/hour

Pump current consumption = 0.13 amp-seconds/pulse

In 1 hour, pump current consumption = 6 * 0.13 amp-seconds/pulse = 0.78 amp-seconds/hour

Quiescent current 10 microamps = 0.01 mA

In 1 hour, quiescent current consumption = 0.01 mA * 3600 seconds/hour = 0.036 amp-seconds/hour

Total current consumption / hour = 1.2 + 0.78 + 0.036 = 2.02 amp-seconds/hour

Capacity = (5 amp-hours * 3600 seconds/hr) / (2.02 amp-seconds/hour) = 8910 hours = 371 days = 1.02 years

Number of samples = 8910 hours * 6 samples/hour = 53460 samples

S>OUTPUTSAL=Y

S>OUTPUTSV=Y

S>FORMAT=1

S>NAV G=4

S>PUMPINSTALLED=Y

S>SAMPLENUM=0

S>INTERVAL=600

S>STORETIME=Y

S>TXREALTIME=N

S>STARTDDMMYY=030508

S>STARTRHHMMSS=000000

start time = 03 May 2008 00:00:00

S>DS

ds

SBE37-SM V 2.6b SERIAL NO. 5309 01 Jan 1980 10:40:09

logging not started

sample interval = 600 seconds

samplenum = 32523, free = 158127

do not transmit real-time data

output salinity with each sample

output sound velocity with each sample

store time with each sample

number of samples to average = 4

serial sync mode disabled

wait time after serial sync sampling = 30 seconds

internal pump is installed

temperature = 17.19 deg C

S>ddmmyy=020508

S>hhmmss=203000

S>ds

SBE37-SM V 2.6b SERIAL NO. 5309 02 May 2008 20:30:01

logging not started

sample interval = 600 seconds

samplenum = 32523, free = 158127

do not transmit real-time data

output salinity with each sample

output sound velocity with each sample

store time with each sample

number of samples to average = 4

serial sync mode disabled

wait time after serial sync sampling = 30 seconds

internal pump is installed

temperature = 17.22 deg C

S>qs

□□SBE 37-SM

S>ds

SBE37-SM V 2.6b SERIAL NO. 5309 02 May 2008 20:30:09

logging not started

sample interval = 600 seconds

samplenum = 32523, free = 158127

do not transmit real-time data

output salinity with each sample

output sound velocity with each sample

store time with each sample

number of samples to average = 4

serial sync mode disabled

wait time after serial sync sampling = 30 seconds

internal pump is installed

temperature = 17.24 deg C

S>OUTPUTSAL=Y

S>OUTPUTSV=Y

S>FORMAT=1

S>NAVG=4

S>PUMPINSTALLED=Y

S>SAMPLENUM=0

S>INTERVAL=600

S>STORETIME=Y

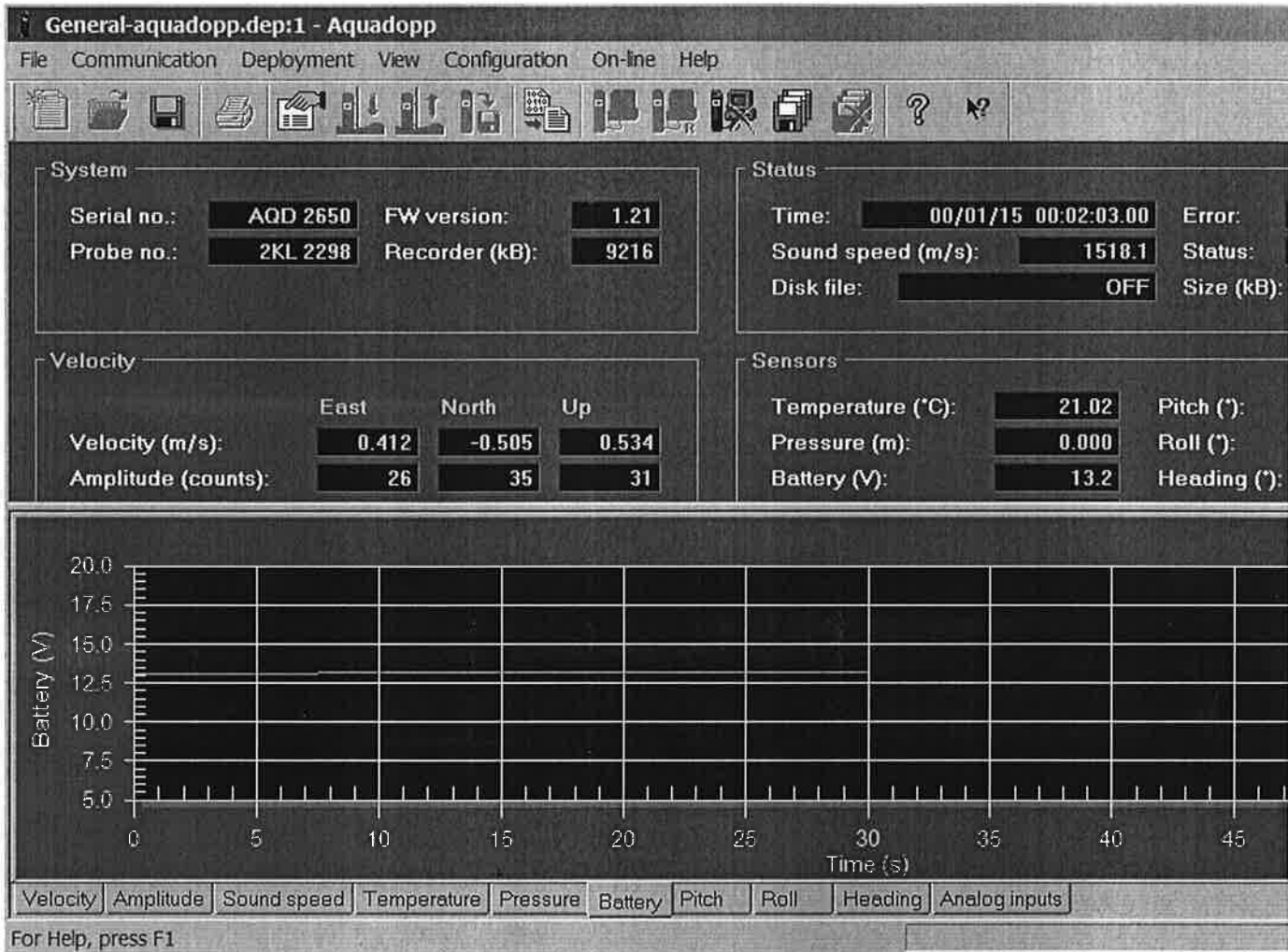
S>TXREALTIME=N

S>STARTDDMMYY=030508

S>STARTHHMMSS=000000

start time = 03 May 2008 00:00:00
S>DS
SBE37-SM V 2.6b SERIAL NO. 5309 02 May 2008 20:31:35
logging not started
sample interval = 600 seconds
samplenummer = 0, free = 190650
do not transmit real-time data
output salinity with each sample
output sound velocity with each sample
store time with each sample
number of samples to average = 4
serial sync mode disabled
wait time after serial sync sampling = 30 seconds
internal pump is installed
temperature = 17.13 deg C
S>SGTARTTARTLATER
start time = 03 May 2008 00:00:00
□

TEST: 2650
Coms: 422, 9600
Start: April 25, 2008 @ 1200UTC
END: Mid October



Deployment Planning

Standard Advanced

Setup

Measurement interval (s): 1800

Average interval (s): 120

Measurement load (%): 4 ☒ Auto

Blanking dist. (m): 0.37

Compass upd. rate (s): 5

Power level

High Low

☐ File wrapping

Deployment planning

Assumed duration (days): 180

Battery utilization (% of 50 Wh): 90

Memory required (MB): 0.5

Vertical vel. prec. (cm/s): 1.5

Horizont. vel. prec. (cm/s): 1

Speed of sound

☒ Measured

Salinity (ppt): 32

☐ Fixed (m/s): 1525

Diagnostics

☒ Enable

Interval (min): 1440

Number of samples: 20

Coordinate system

☒ ENU ☐ XYZ ☐ Beam

Analog inputs

Input 1: NONE

Input 2: NONE

☐ Output power

Update from Standard

OK Cancel Apply Help

Aquadopp

Successful deployment!

Data recording will start in 1 days, 16 hours and 45 minutes from now.

Please disconnect the instrument from the PC before proceeding.

Deployment log file:
E:\Deployment Files\2008-Ricks\2650-AS04-J.log

OK

=====

Deployment : AS04-J
 Current time : 2008-04-23 19:14:07
 Start at : 2008-04-25 12:00:00
 Comment:
 AS04-J
 2650
 Start: 2008-04-25 @ 1200UTC End: Mid Oct

Measurement interval (s) : 1800
 Average interval (s) : 120

Blanking distance (m) : 0.37
Diagnostics interval(min) : 1440
Diagnostics samples : 20
Measurement load (%) : 4
Power level : HIGH
Compass upd. rate (s) : 5
Coordinate System : ENU
Speed of sound (m/s) : MEASURED
Salinity (ppt) : 32
File wrapping : OFF

Assumed duration (days) : 180.0
Battery utilization (%) : 90.0
Battery level (V) : 13.4
Recorder size (MB) : 9
Recorder free space (MB) : 9.000
Memory required (MB) : 0.5
Vertical vel. prec (cm/s) : 1.5
Horizon. vel. prec (cm/s) : 1.0

Aquadopp Version 1.23
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