

DEPLOYMENT RECORD

Project Name: Juan de Fuca Start Date: May 2007 End Date: Sep. 2007
 Mooring Name: JF2E-J Station Name: JF2E

Geog. Desc.: Pillar Point Tide: +0.3m Renfrew
 Latitude: 48° 15.161' Longitude: 124° 09.781'
 Water Depth: 149m datum Ice Thickness:
 Magnetic decl: Time Zone: PDT Anchor Type: 2 wheels 1450lbs
 Date: May 17 2007 Time Anchor Dropped: 1051 PDT Date:
 Remarks:

RECOVERY RECORD

Date: Sep. 17 2007 Time Anchor Released: 1228 PDT
 Remarks: - recovered in heavy fog
- relied on beacons - VHF OK Light OK

INSTRUMENTS (Start at TOP) Argos had flooded * Recovery
- a little tense * Beacons are a good thing

Type	Serial #	Depth	Time in	Time Out	Notes
ADCP					
WH150	7592	139m	1051 PDT		
SBE37	5308	142m	"		

Argos M265 3733

TT301#81 ER2

Release	Serial	R Code	Arm Code	Freq	On/Off	B0	B1	Aux Codes
RT661	152	PLS	WIN	RNG	6442/6443			Deployed Disabled
								ER112 OFF
Pinger 1	Type	Serial	Pinger 2	Type	Serial	Battery Volt		
RJE	1/2 x 27	?				6.41		

FLOTATION

Type	Serial #	Size	Colour
Floater	40" x 1000m		yellow
	+ collar		

Type	Serial #	Size	Colour

Data Entry by:

PlanADCP (Advanced) : [JF2EG]

BackToSC Settings View Help

Basic Advanced Expert

Environmental Setup: Transducer Depth: 145 m Salinity: 34 ppt Magnetic Variation: 0 Temperature: 5 °C	Profiling Setup: Pings Per Ensemble: 80 Number of Depth Cells: 36 Depth Cell Size: 4 m	Deployment Consequences: First Cell Range: 8.40 m Last Cell Range: 148.40 m Max Range: 216.20 m Standard Deviation: 0.78 cm/s Ensemble Size: 874 bytes Storage Required: 12.00 MB Power Usage: 691.30 Wh Battery Pack Usage: 1.5
--	--	---

Deployment Timing Setup:

Duration: 150 days

Ensemble Interval: 00:15:00.00

Ping Int(☒ Auto): 00:00:11.25

☐ Ping Immediately After Deployment

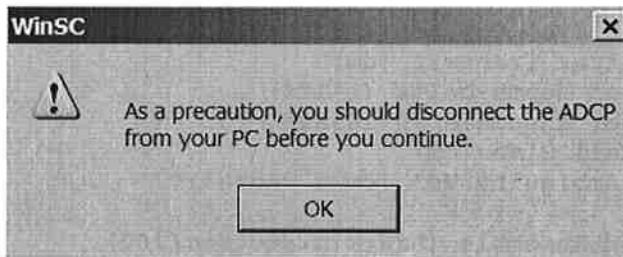
First Ping Date and Time: 12-May-2007 12:00:00

Notes:

Mooring: JF2E-G
 Serial: 7592
 Start: May 12, 2007 @ 1200UTC
 End: Early October

Workhorse Sentinel: 150 kHz/ High Res./ 2 Battery Packs/ Memory: 256 MB

NUM



BAUD: 115200

>>>>> Function starting 05/07/07 21:56:53 >>>>>

>>>>> Function starting 05/08/07 16:28:23 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
RD Instruments (c) 1996-2005
All Rights Reserved.
>TS070508162826
>CZ

Powering Down

>>>>> Function starting 05/08/07 16:28:36 >>>>>

[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 = 0704 ----- Blank After Transmit (cm)
WN = 128 ----- Number of depth cells (1-128)
WP = 00087 ----- Pings per Ensemble (0-16384)
WS = 0400 ----- Depth Cell Size (cm)
WV = 050 ----- Mode 1 Ambiguity Vel (cm/s radial)

TE = 01:00:00.00 ----- Time per Ensemble (hrs:min:sec.sec/100)
TF = **/**/**, **: **: ** ----- Time of First Ping (yr/mon/day, hour:min:sec)
TP = 00:00.00 ----- Time per Ping (min:sec.sec/100)
TS = 07/05/08,16:28:39 --- Time Set (yr/mon/day, hour:min:sec)

EA = +00000 ----- Heading Alignment (1/100 deg)
EB = +00000 ----- Heading Bias (1/100 deg)
ED = 00900 ----- Transducer Depth (0 - 65535 dm)
ES = 34 ----- 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)

Press any key to continue

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
Press any key to continue

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

>TS?

TS = 07/05/08,16:28:43 --- Time Set (yr/mon/day,hour:min:sec)

>PS0

Instrument S/N: 7592

Frequency: 153600 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 = -1.490503E-144

c2 = -5.656558E-08

c1 = +5.733202E-01

Offset = +3.042041E+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: 6

Board Serial Number Data:

43 00 00 03 B4 CB B8 09 TUN727-1005-05A

D2 00 00 00 8D 85 C4 09 REC727-1004-05A

DB 00 00 00 7E A7 BA 09 CPU727-2000-00J

D2 00 00 00 D8 57 46 09 DSP727-2001-05G

```

13 00 00 00 7E 9B 2E 09 HPI727-3007-00A
CC 00 00 00 7E 9C F3 09 HPA727-3009-02A
>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.....NOT DETECTED

```

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						
340.930	-23.320	20.970	Up	22.970C	21.070C	-
2.0 kPa						
340.950	-23.320	20.970	Up	22.980C	21.070C	-
23.8 kPa						
340.960	-23.320	20.970	Up	22.980C	21.080C	-
25.7 kPa						
340.910	-23.320	20.970	Up	22.970C	21.060C	-
1.5 kPa						
340.940	-23.320	20.970	Up	22.960C	21.070C	-
10.1 kPa						
340.940	-23.320	20.970	Up	22.980C	21.090C	-
19.2 kPa						
340.930	-23.320	20.970	Up	22.980C	21.070C	-
10.7 kPa						
340.950	-23.320	20.970	Up	22.980C	21.080C	-
12.9 kPa						

>RS

RS = 003,058 ----- REC SPACE USED (MB), FREE (MB)

[illegible]

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

>CZ

Powering Down

```
>>>>> Function starting 05/08/07 16:30:12 >>>>>
```

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

Pressure Offset Updated in NVRAM.

>CZ

Powering Down

```
>>>>> Function starting 05/08/07 16:30:21 >>>>>
```

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

Recorder erased.

>CZ

Powering Down

```
>>>>> Function starting 05/08/07 16:32:21 >>>>>
```


[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>RR
Recorder Directory:
Volume serial number for device #0 is c497-71b7

No files found.

Bytes used on device #0 = 0
Total capacity = 63680512 bytes
Total bytes used = 0 bytes in 0 files
Total bytes free = 63680512 bytes

>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>CR1
[Parameters set to FACTORY defaults]
>CF11101
>EA0
>EB0
>ED1450
>ES34
>EX11111
>EZ1111111
>WA50
>WB0
>WD111100000
>WF352
>WN36
>WP80
>WS400
>WV175
>TE00:15:00.00
>TP00:11.25
>TF07/05/12 12:00:00
>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 JF2EG
>CS

Mooring: JF2C-J
UCats X 1
Serial
5308

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

Command Summary:

DDMMYY=180507

HHMMSS=192000 //(UTC)

OUTPUTSAL=Y

OUTPUTSV=Y

FORMAT=1

NAV G=4

PUMPINSTALLED=Y

SAMPLENUM=0

INTERVAL=600

STORETIME=Y

TXREALTIME=N

STARTDDMMYY=190507

STARTHHMMSS=180000

STARTLATER

```

S>
S>
S>ds
SBE37-SM V 2.6b  SERIAL NO. 5308      01 Jan 1980  00:00:29
logging not started
sample interval = 60 seconds
samplenumber = 0, free = 190650
do not transmit real-time data
do not output salinity with each sample
do not output sound velocity with each sample
store time with each sample
number of samples to average = 1
serial sync mode disabled
wait time after serial sync sampling = 30 seconds
internal pump is installed
temperature = 16.46 deg C
S>
S>dc
SBE37-SM V 2.6b  5308
temperature: 17-feb-07
    TA0 = -9.794965e-05
    TA1 = 2.841009e-04
    TA2 = -2.936065e-06
    TA3 = 1.686635e-07
conductivity: 17-feb-07
    G = -1.015054e+00
    H = 1.554627e-01
    I = -8.663959e-05
    J = 3.248631e-05
    CPCOR = -9.570000e-08
    CTCOR = 3.250000e-06
    WBOTC = 2.055367e-05
pressure S/N 2367431, range = 1450 psia: 14-feb-07
    PA0 = 2.331645e-01
    PA1 = 6.871163e-02
    PA2 = -2.501161e-09
    PTCA0 = -8.516106e+01
    PTCA1 = 2.536109e-01
    PTCA2 = -4.522027e-03
    PTCSB0 = 2.601837e+01
    PTCSB1 = -5.250000e-04
    PTCSB2 = 0.000000e+00
    POFFSET = 0.000000e+00
rtc: 17-feb-07
    RTCA0 = 9.999721e-01
    RTCA1 = 1.726221e-06
    RTCA2 = -3.122292e-08
S>ddmmyy=180507
S>hhmmss=192255
S>ds
SBE37-SM V 2.6b  SERIAL NO. 5308      18 May 2007  19:22:56
logging not started
sample interval = 60 seconds
samplenumber = 0, free = 190650
do not transmit real-time data
do not output salinity with each sample

```

do not output sound velocity with each sample
store time with each sample
number of samples to average = 1
serial sync mode disabled
wait time after serial sync sampling = 30 seconds
internal pump is installed
temperature = 16.44 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=190507
S>starthhmmss=180000
start time = 19 May 2007 18:00:00
S>ds
SBE37-SM V 2.6b SERIAL NO. 5308 18 May 2007 19:23:52
logging not started
sample interval = 600 seconds
samplenum = 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 = 16.53 deg C
S>startlater
start time = 19 May 2007 18:00:00
□□SBE 37-SM
S>ds
SBE37-SM V 2.6b SERIAL NO. 5308 18 May 2007 19:24:02
not logging: waiting to start at 19 May 2007 18:00:00
sample interval = 600 seconds
samplenum = 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 = 16.53 deg C
S>