

DEPLOYMENT RECORD

Project Name: Juande Fuca Start Date: Sept 18/07 End Date: mid May/08
 Mooring Name: 8F2E-K Station Name: JF2E

Geog. Desc.: Pillar Pt. US side Tide: +2.0m Victoria
 Latitude: 48° 15.147' Longitude: 124° 09.749'
 Water Depth: 150m datum Ice Thickness: —
 Magnetic decl: — Time Zone: PDT Anchor Type: 2 wheels 1405/lbs
 Date: Sep 18, 2007 Time Anchor Dropped: 0930 PDT Date: —
 Remarks: —

RECOVERY RECORD

Date: May 1, 2008 Time Anchor Released: 0841 PDT
 Remarks: —

-recovered without incident.

INSTRUMENTS (Start at TOP)

Type	Serial #	Depth	Time in	Time Out	Notes
WH150	7592	140m	0925 PDT		cut @ 1558 UTC
RCM11	564	142.7m			
6BE37	5309	144m			Pumped

Argos 20920

Rel. Win.

FR1+2

TT301#81 FR2

Release	Serial	R Code	Arm Code	Freq	On/Off	B0	B1	Aux Codes
RT661	152	6484	6441	A000	6442/6443			
Pinger 1	Type	Serial	Pinger 2	Type	Serial	Battery Volt		
R1E	1/2 x 27	7052	—	—	—	6.3	—	—

FLOTATION

Type	Serial #	Size	Colour
40°	1000m	Foam Float	Yellow

Type	Serial #	Size	Colour

Data Entry by:

RCM 11 Deployment Sheet

Instrument Serial: 564 #ofChannels: 6 Recording Interval: 30
DSU ID: 4079 Project: _____
File ID: 564-JF2E-K

Pressure Sensor:

Type: SR10
Range: 20 000 KPA
Serial#: 125

Conductivity Cell:

Type: _____
Range: _____
Serial#: _____

Temperature Sensor:

Type: _____
Range: -2 to 21°
Serial#: 2214

Doppler Current Sensor:

Type: SR10
Serial#: 724

Max Depth: 2000 M

Burst Mode

First Record:

Channel 1	<u>757</u>
Channel 2	<u>0</u>
Channel 3	<u>0</u>
Channel 4	<u>960</u>
Channel 5	<u>0</u>
Channel 6	<u>5</u>
Channel 7	<u>—</u>
Channel 8	<u>—</u>

Date: Sept 19/07 Time: 0300 UTC

Last Record:

Channel 1	<u>757</u>
Channel 2	<u>41</u>
Channel 3	<u>336</u>
Channel 4	<u>414</u>
Channel 5	<u>0</u>
Channel 6	<u>70</u>
Channel 7	<u>—</u>
Channel 8	<u>—</u>

Date: April 27/08 Time: 23:31 UTC

DSU was full

NOTES: 9.66 V @ Start 7.72 V @ End
out of water @ 1550 UTC May 1st
2008
10698 records expected 10875

Bat type ~~757K6051~~
 757K6051 x2
 w/ blue
 cage(x1)

PlanADCP (Advanced) : [JF2EH]

BackToSC Settings View Help

Basic Advanced Expert

Environmental Setup: Transducer Depth: 145 m Salinity: 34 ppt Magnetic Variation: 0 ° Temperature: 7 °C	Profiling Setup: Pings Per Ensemble: 50 Number of Depth Cells: 40 Depth Cell Size: 4 m	Deployment Consequences First Cell Range: 8.40 m Last Cell Range: 164.40 m Max Range: 205.77 m Standard Deviation: 0.99 cm/s Ensemble Size: 954 bytes Storage Required: 23.58 MB Power Usage: 803.30 Wh Battery Pack Usage: 1.8
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Deployment Timing Setup:

Duration: 270 days

Ensemble Interval: 00:15:00.00

Ping Int. (☒ Auto): 00:00:18.00

☐ Ping Immediately After Deployment

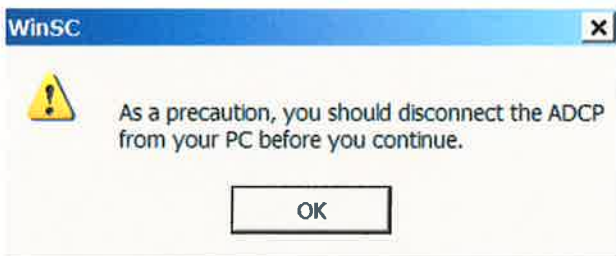
First Ping Date and Time: 18-Sep-2007 12:00:00

Notes

JF2E-K
 7592 with 2 packs installed (same pack as 75kHz)
 Start Sept 18, 2007 @ 1200 UTC

Workhorse Sentinel: 150 kHz/ High Res./ 2 Battery Packs/ Memory: 64 MB

NUM



note: Recovery -
 This instrument had
 fairly aggressive corrosion
 on most of the stainless
 hardware !!!

>>>>> Function starting 09/18/07 01:33:45 >>>>>
 Ex/áQSBY
 >>>>> Function starting 09/18/07 01:47:24 >>>>>

[BREAK Wakeup A]
 WorkHorse Broadband ADCP Version 16.28
 RD Instruments (c) 1996-2005
 All Rights Reserved.
 >TS070918014727
 >CZ

Powering Down

>>>>> Function starting 09/18/07 01:47:32 >>>>>

[BREAK Wakeup A]
 WorkHorse Broadband ADCP Version 16.28
 RD Instruments (c) 1996-2005
 All Rights Reserved.
 >AZ
 Pressure Offset Updated in NVRAM.

>CZ

Powering Down

>>>>> Function starting 09/18/07 01:47:39 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
RD Instruments (c) 1996-2005
All Rights Reserved.
>RE ErAsE erasing...
Recorder erased.

>CZ

Powering Down

>>>>> Function starting 09/18/07 01:47:48 >>>>>

[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 = 0352 ----- Blank After Transmit (cm)

WN = 036 ----- Number of depth cells (1-128)

WP = 00080 ----- Pings per Ensemble (0-16384)

WS = 0400 ----- Depth Cell Size (cm)

WV = 175 ----- Mode 1 Ambiguity Vel (cm/s radial)

TE = 00:15:00.00 ----- Time per Ensemble (hrs:min:sec.sec/100)

TF = **/**/**, **: **: ** --- Time of First Ping (yr/mon/day, hour:min:sec)

TP = 00:11.25 ----- Time per Ping (min:sec.sec/100)

TS = 07/09/18,01:47:50 --- Time Set (yr/mon/day, hour:min:sec)

EA = +00000 ----- Heading Alignment (1/100 deg)

EB = +00000 ----- Heading Bias (1/100 deg)

ED = 01450 ----- 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

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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 = 07/09/18,01:47:54 --- 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: DOWN
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 = +4.809336E+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: 5

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.....NOT DETECTED
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.....***FAIL***
Narrow Bandwidth.....PASS
RSSI Filter.....PASS
Transmit.....PASS
SENSOR TESTS:
H/W Operation.....PASS
>PC2

```

Press any key to quit sensor display ...

Heading	Pitch	Roll	Up/Down	Attitude Temp	Ambient Temp	PRESSURE
309.52ø	-2.29ø	-0.11ø	Down	20.57øC	19.05øC	3.1 kPa
309.57ø	-2.33ø	-0.54ø	Down	20.57øC	19.05øC	-11.1 kPa
309.81ø	-2.29ø	-0.69ø	Down	20.58øC	19.05øC	2.7 kPa
309.90ø	-2.47ø	-0.69ø	Down	20.57øC	19.06øC	9.0 kPa

RS = 000,061 ----- REC SPACE USED (MB), FREE (MB)

BEAM CONTINUITY TEST

[illegible]

35 48 31 35
35 48 31 35
35 48 31 35
35 48 31 35
35 48 31 35
35 48 31 35
35 48 31 35
35 47 31 35
35 47 31 35
35 47 31 35
35 47 31 35
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35 47 31 35
35 47 31 35
35 47 31 35
35 47 31 35

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

>CZ

Powering Down

>>>>> Function starting 09/18/07 01:49:22 >>>>>

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

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

No files found.

Bytes used on device #1 = 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
RD Instruments (c) 1996-2005
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>CR1

[Parameters set to FACTORY defaults]

>CF11101

>EA0

>EB0

>ED1450

>ES34

>EX11111

>EZ1111111

>WA50

>WB0

>WD111100000

>WF352

>WN40

>WP50

>WS400

>WV175

>TE00:15:00.00

>TP00:18.00

>TF07/09/18 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 JF2EH

>cs

Mooring: JF2E-K
UCat
Serial
5309

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

Command Summary:

DDMMYY=XXXXXX
HHMMSS=XXXXXX //(UTC)
OUTPUTSAL=Y
OUTPUTSV=Y
FORMAT=1
NAV G=4
PUMPINSTALLED=Y
SAMPLENUM=0
INTERVAL=600
STORETIME=Y
TXREALTIME=N
STARTDDMMYY=180907
STARTHHMMSS=200000
STARTLATER