

Ventana Ins and Outs

Craig Dawe

**How to integrate equipment to
Ventana**



Vehicle launch

Ventana Specifications

- Depth rating 1850 m
6100 ft
- Working tether 2100m
6900 ft
5 power cond
5 fibers
- 40 hp Electro/
Hydraulic



- Main Power
 - 25.3 kW(2300 VAC@11A)
- Hydraulic Power
 - 3000psi @25GPM
- Hotel Power
 - 3.4 kW lights
 - 1.1 kW system
 - 5.0 kW Toolsled
- Electronic Interfaces
 - RS232
 - RS485
 - 10baseT Ethernet
 - Multimode Fiber Optics
- Cameras
 - Sony HDTV
 - Insite Orion Zoom
 - Insite DXC 950
 - DSPL MSC2000



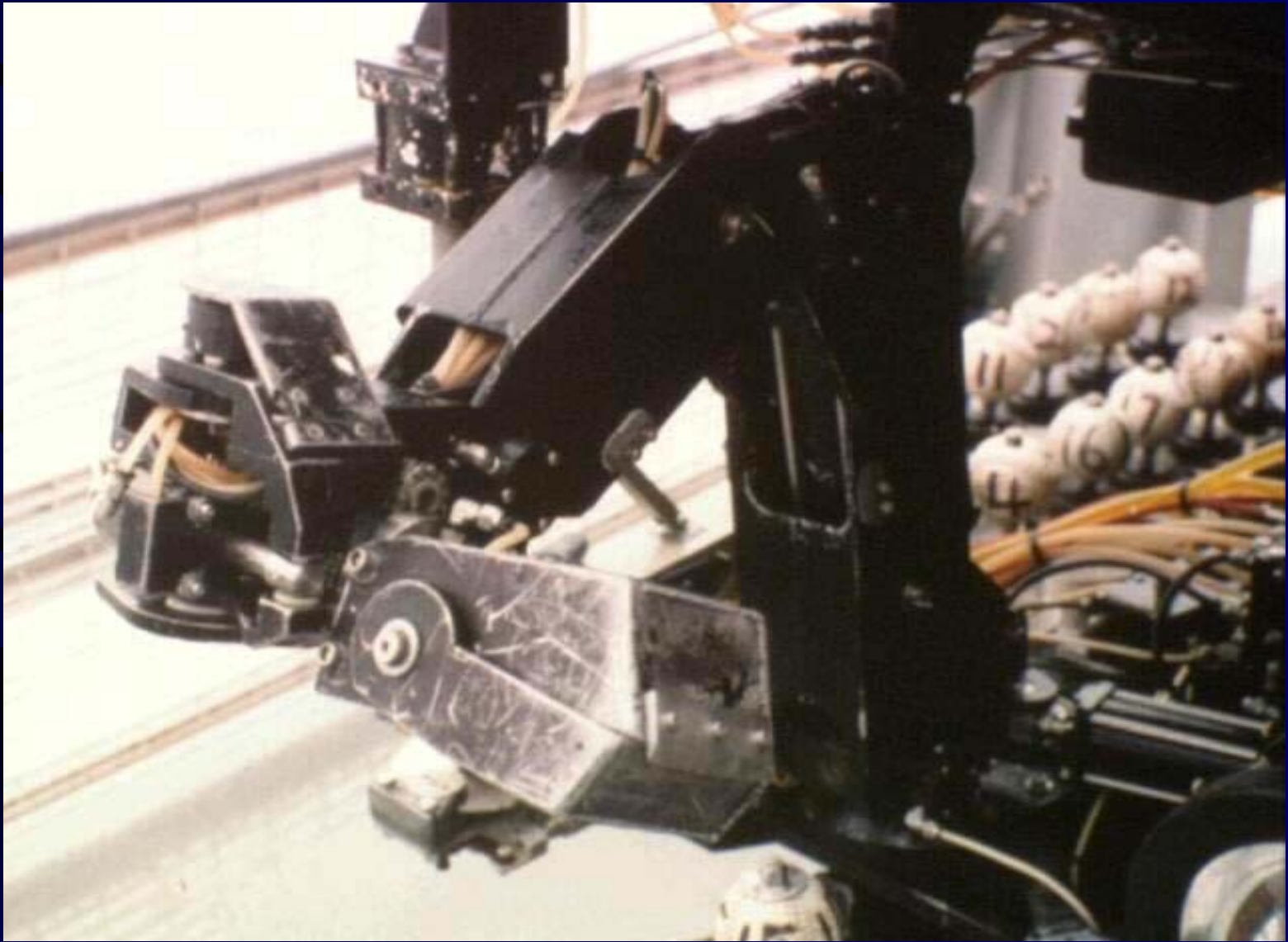
Seismometer/Data Logger Launch



Sonardyne Homer Pro Hydrophone



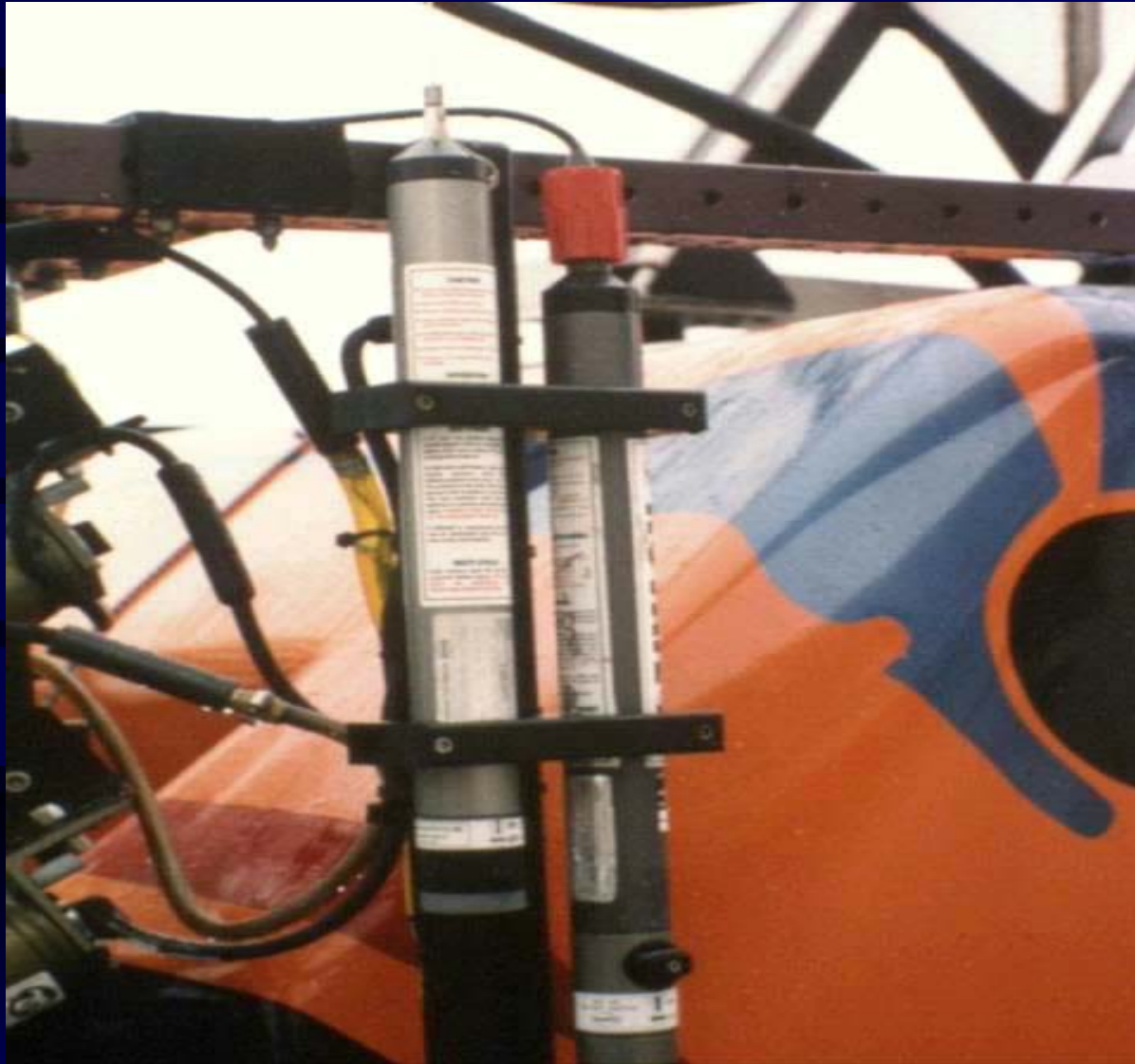
HID Lamp 400W up to 6



ISE 7 function SC Manipulator



Heatflow Probe Deployment



Radio Beacon & Strobe

Video System Details

- Subsea
 - Sony HDTV HDSDI Camera
 - Insite Aries 3 chip RGB Camera
 - 8 Switchable NTSC Camera sources
 - 5 chs viewable at once.
 - Two 8 X 4 Video Switchers
 - Other options available based on requirements

Video System Details

Surface

- Recording
 - Digital Beta (SDI)
 - Digital High Definition (HDSDI)
 - Analog High Definition
 - VHS or other system supplied by user
- Switcher 30 X 30 Dynair
- Magni Waveform Monitor
- uWave Transmitter/Receiver

Video System Details

- Video specifications/interconnections
 - 10 pin Seacon MIN-K-10-CCP
 - 1 RS232 TX/RS485 +
 - 2 RS232 RX/RS485 -
 - 3 Data Video Pwr Gnd
 - 4 Spare
 - 5 +24vdc (max 40 Watts)
 - 6 +12vdc(max 40 Watts)
 - 7 Sync/spare
 - 8 Video
 - 9 Spare
 - 0 Spare
 - Options
 - spare wires can be used for options, zoom, focus etc

Video System Details

Optional Configurations

- RGB Camera
 - 75 watts power
 - RS250C Standard
 - RGB + NTSC out
 - Configured as main viewing camera
- Analog Camera
 - 40 watts power
 - analog zoom +/-12vdc
 - analog focus +/-12vdc
 - Single Video Channel

Contact Ventana Group for wiring details

Standard Science Interface

- 3 available plus custom implementations
 - Port, Starboard & FOCan
- Data
 - RS232 Standard RS485 Optional
 - 10baseT on custom connection
- Power
 - 12/24 vdc up to 40 watts
 - 120/240 VAC on custom connection

Standard Science Interface

- Science Port specifications/interconnections
 - 10 pin Seacon MIN-K-10-CCP
 - 1 RS232 TX/RS485 +
 - 2 RS232 RX/RS485 -
 - 3 Data Video Pwr Gnd
 - 4 Spare
 - 5 +24vdc (max 40 Watts)
 - 6 +12vdc(max 40 Watts)
 - 7 Sync/spare
 - 8 Spare
 - 9 Spare
 - 0 Spare
 - Options
 - spare wires can be used for options, zoom, focus etc

Hydraulic System

- 3000 PSI Primary @ 25 gpm
 - 1 4 way 3 position Servo valve @ 10gpm
 - 2 4 way 3 position Servo valve @ 5gpm
 - Tool sled port max 10 gpm
- 800 PSI Secondary @ max 5 gpm
 - 10 4way 3 position solenoid valves
 - 1 4 way 3 position Servo valve @ 5gpm
- System interconnect
 - swagelok 400/800 qds
 - swagelok 400/800 fittings

ROV Crew

- Craig Dawe Chief Pilot
- Knute Brekke Senior Pilot
- Mark Talkovic Pilot
- Denver (DJ) Osborne Pilot

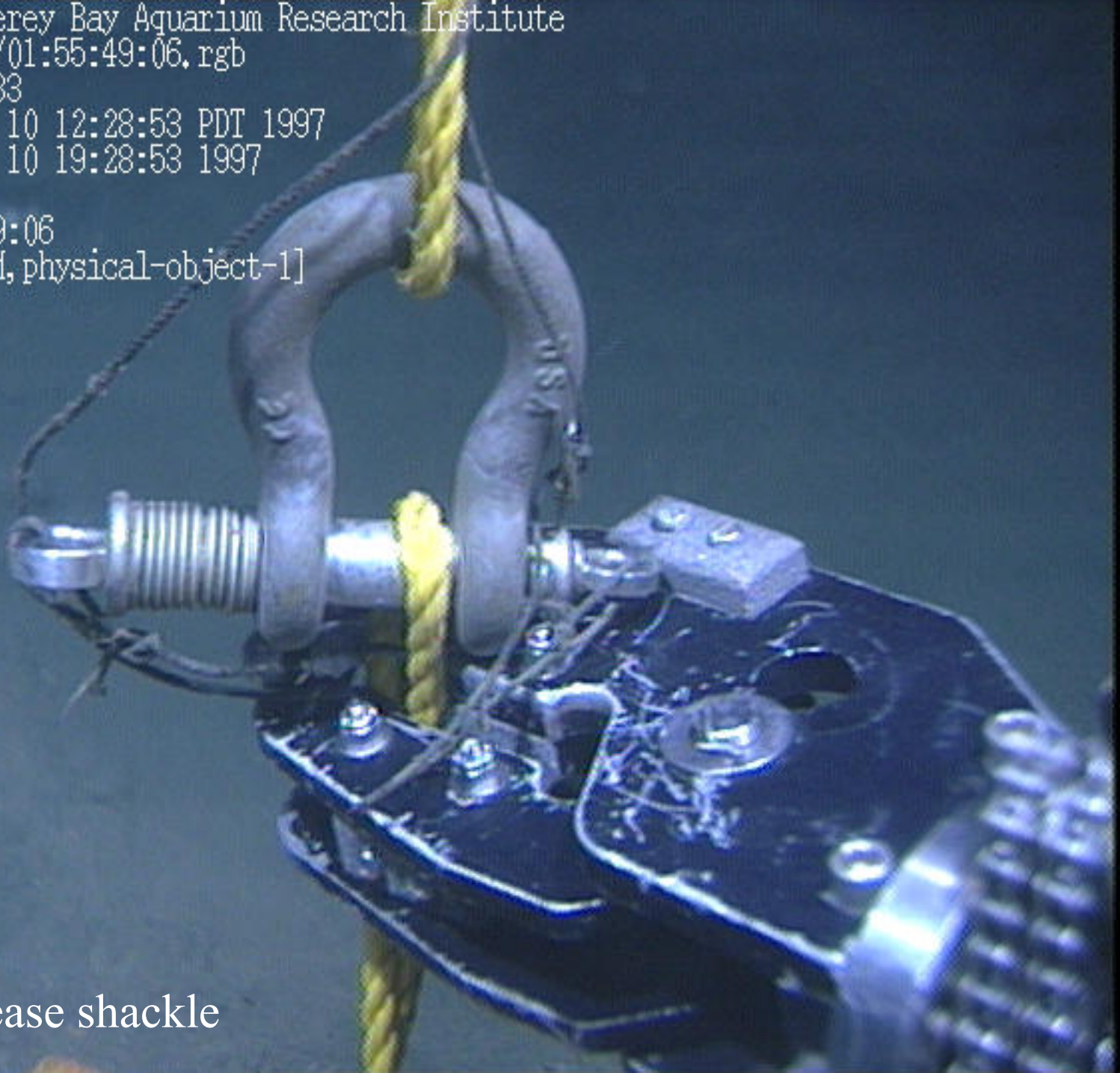


The image is very dark and blurry, showing a central bright spot that could be a light source or a reflection from a core hole. The overall scene is indistinct due to low resolution and high contrast.

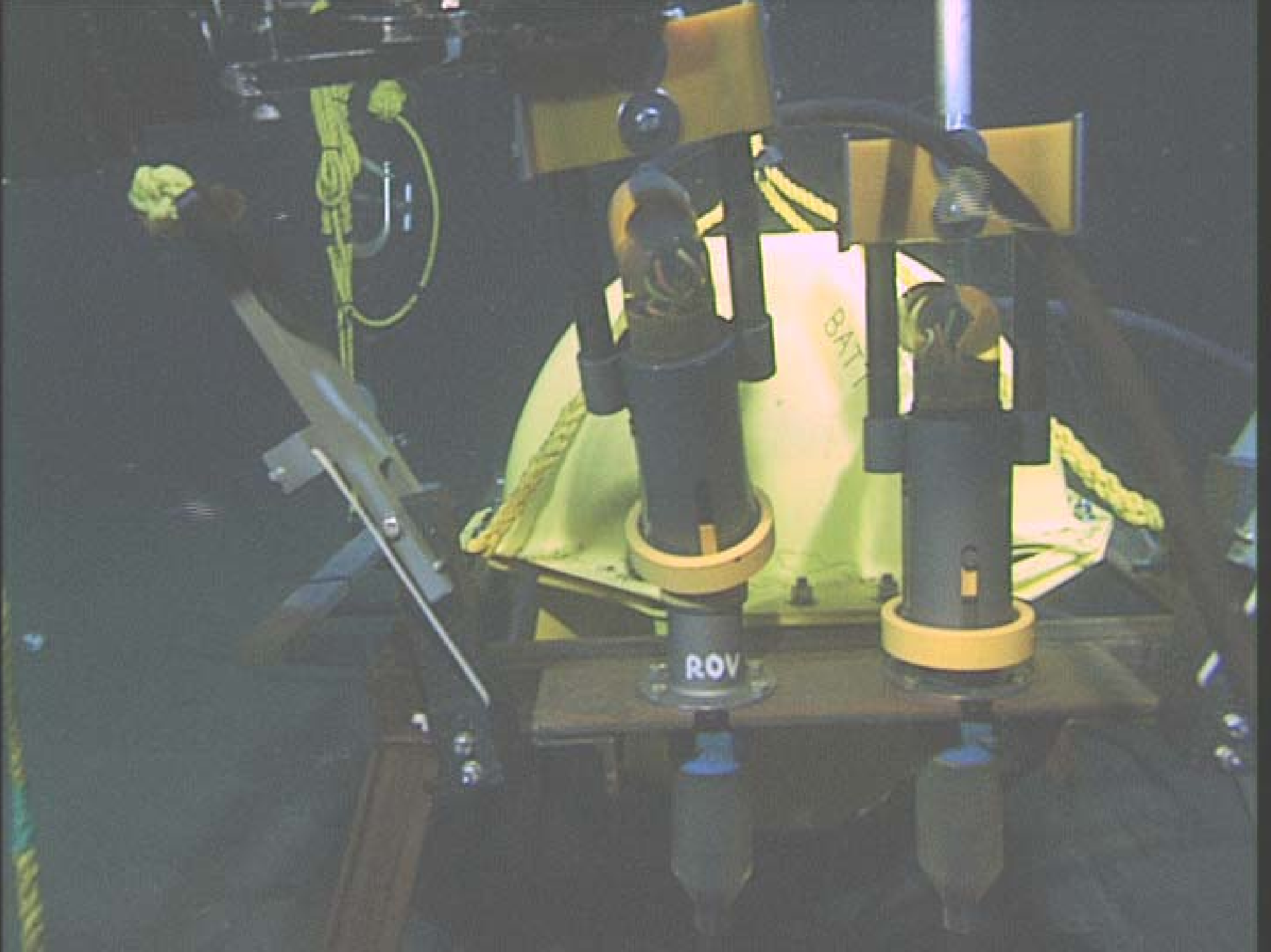
Core hole reaming process



Copyright 1997 Monterey Bay Aquarium Research Institute
OrigFile = 1997253/01:55:49:06.rgb
EPOCHsecs = 873919733
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UTCTime = Wed Sep 10 19:28:53 1997
YYYYJJJ = 1997253
TapeTC = 01:55:49:06
Annotation= [descend, physical-object-1]



Elevator release shackle



Specifications

- **Length:** 3.10 m
Width: 1.80 m
Height: 2.30 m
Weight: 2,338 kg
Depth: 1,850 m
Forward speed: 50 m/min with 1,000 m cable deployed
Vertical speed: 30 m/min descent; 20 m/min ascent
Payload: 136 kg
Benthic tool sled weight: dry: 200 kg; full of water: 455 kg
Midwater sled weight: dry: 190 kg; full of water: 318 kg configurable
ballast: 170 kg

Specifications (cont)

- **Power**

Hotel: 7 kW

Lighting: 3.4 kW

System: 1.1 kW

Science: 2.5 kW

Hydraulic power: 3.000 psi; 40 hp Franklin electric motor (2,300 V AC); Rexroth A10-25 hydraulic pump

Thrusters: 2 Rexroth A2F with ISE nozzles; 4 Volvo F11-10 with ISE nozzles

Umbilical cable: 2,300 m; 5 #12 power conductors; 5 multi-mode and 5 single-mode fibres

Specifications (cont)

- **Sliprings:** Focal 2SM/2MM 6 #12 Electric
- **Multiplexer:** Focal 903 8Video 21 RS232 Serial 5 RS485 Serial
- **Navigation**
Control System: DTEC Inc Custom RTLinux Control based on PC surface platform and GESPAC subsea platform
- **Altimeter:** Mesotech Echo Sounder 807
Depth Sensor: Paroscientific 8B2000
Gyro: IXSea Fiber Optic Gyro
- **Pitch and Roll:** IXSea Fiber Optic Gyro

Specifications (cont)

- **Doppler Velocity Log:** RDI Workhorse 1200Khz
- **Lights:** 4 × DSPL daylight lamps 400 W; 4 × DSPL incandescent lamps 500 W; 2 × auxiliary lights to 500 W
- **Positioning**
 - Mesotech 330 kHz low res scanning sonar
 - Mesotech 675 kHz high res Fan/Cone sonar
 - profile or scanning mode
- USBL (Ship to ROV), ORE Trackpoint II, Responder to 3,000 m
 - USBL (ROV to Beacon), Sonardyne Homer Pro 4,000 m capable, 400 m range (LOS)

Specifications (cont)

- **Cameras**

- 1 × Sony HDC-750A high definition camera with HA10X5.2 Fujinon Zoom Lens

- 6 × deep sea power and light MSC2000 pencil cameras lens f4 3, 5 mm

- 2 × insight Orion zoom cameras

- Tools:** 2 × 7-function manipulators

- Sensors:** CTD; DO sensor; transmissometer