

**Dive Transcript
Starboard Observer
R. Lutz**

Dive 4206 June 30, 2006

Pilot- Mark Spear; port observer-Marv Lilley; starboard observer: Rich Lutz

Took scans with ECHEM during Alvin's descent to bottom.....started scans at 564 m below the surface (File Body name was 4206 initially during descent.....later changed to 4206A and later during dive to 4202B.....each time gave a new File Body name, I set the Index to 0, which would start over numbering scans in order)

GMT

	Scans	Depth
1434:53	1-6	564m
1436:57	7-13	640
1439:22	14-18	705
1441:14	17-23	762
1442:	Hit Manual DC Mode and continuous for temperature calibration	

	ECHEM	Depth	Alvin Window
	temp		temp
1444:09	11.0	800m	5.3
1445:27	11.0	891	5.1

	Scans	Depth
1446:27	24-36	980
1450:23	37-41	1051

	ECHEM	Depth	Alvin Window	Low-T
	temp		temp	Probe
1451:45	10.0	1100m	4.2	
1452:43	10.0	1113	4.1	
1454:34	10.0	1164	3.9	4.17
1455:56	9.5-10.0)(alt)	1196	3.9	4.0

	Scans	Depth
1457:20	42-49	1232
1459:47	50-62	1292

	ECHEM	Depth	Alvin Window	Low-T
	temp		temp	Probe
1502:45	9.0	1232m	3.3	3.5

	Scans	Depth
1503:52	63-74	1474

1507:20	ECHEM temp 8.5-9.0(alt)	Depth	Alvin Window temp 2.9	Low-T Probe 2.9
1508:23	Scans 75-82	Depth 1560		
1511:21	83-90	1667		
1513:40	ECHEM temp 8.5	Depth	Alvin Window temp 2.6	Low-T Probe 2.7
1515:12	Scans 91-98	Depth		
1517	99-105			
1522	106-109			
1523	110-114			
1525	115-120			
1527	ECHEM temp 7.5-8.0(alt)	Depth	Alvin Window temp 2.0	Low-T Probe 2.0
1529	Scans 121-135	Depth		
1532	ECHEM temp 7.5-8.0(alt) (mostly 7.5)	Depth	Alvin Window temp 1.9	Low-T Probe 1.9
1534:36	Scans 136-145	Depth		
1537	ECHEM temp 7.5	Depth	Alvin Window temp 1.8	Low-T Probe 1.8
1538	Scans 146-150	Depth		
1542	approaching bottom...flat, ropey new sheet flow out starboard window: X 4376; Y 77879			
1543:00	on bottom....X 4378; Y 77879			

	Scans	Depth
1547	151-155	on bottom (first “good scan”)
15:50:54	X 4377; Y 77876	
	Scans	
1553:06	156-163	
1555	picking up rock at landing site (X 4378; Y 77855)	
	Scans	
1556	164-168	
1601:33	digital still of rock sample in claw (rock sampled at landing site) (X 4379; Y77876) – put into milk crate at center aft	
1606	driving to sediment trap	
	Scans	
1606:11	169-174	
1609:35	175-180	
1611:49	181-185	
1613:16	186-188	not good scans????
1614:56	189	
1615:23	190-194	
1617	at sediment trap (X 4511; Y 77875)	
1622:06	scans 195-199 (X 4511; Y 77876)	
1629:16	X 4508; Y 77875....picked up sediment trap....eading toward Bio 9	
	Scans	
1633:49	200-205	X 4575; Y 77933
1635:49	206-210	there was a slight sulfide peak in previous scans
1639:30	211-215	X4602; Y 77959
1640:21	deployed sediment trap (X 4600; Y 77959)(25 m from Bio 9)	

	Scans	
1646:39	216-223	X 4609; Y 77949
1649:49	224-229	X 4592; Y 77977
1651:30	230-234	X 4589; Y 77967
1653	235-241	
1655	242-250	X 4558; Y 77985
1705	251-256	X 4587; Y 77976
1708	257-262	X 4595; Y 77970
1713	263-267	X 4596; Y 77985
1715:15	at "chimlets" at a hydrothermal vent.....near Bio 9????	
	Scans	
1718:48	216-223	X 4613; Y 77001
1744	at P vent – at HOBO probe site (will deploy Marker #10 at this site) X 4627; Y 77938	
1753	computer shut down.....I turned it off	
1754	computer turned back on...renamed File Body to 4206A and set index to 0	
	Scans	
1802:15	1-5	
1806:51	X 4632; Y 77928 – at diffuse flow about 5 m from Marker 10 (later deployed 3 of Lauren's "sandwiches" in the diffuse flow here)	
	Scans	
1816:45	6-16 - scans taken about 2 m above diffuse flow site	
1822:20	18-26 X 4631; Y 77930 – scans taken in diffuse flow (ECHEM temp probe recorded temp of 21.5 C – scans were taken where sandwiches were deployed)	
1825	starboard cam has shots of where deployed Lauren's sandwiches	
1829:59	starboard cam has shot of Lauren's experiments	

1830:36 2 hand-held digital camera shots of Lauren's experiments X 4631; Y 77930

1833:21 ECHEM back in holder – took scan 27 at 1 uA

1834 deployed Marker 8 at site with Lauren's sandwiches

Scans

1835 28 - scans taken at 100 nA

1838 29-35 - sub moving toward old Marker 82 region

1840 36-40

1847 41-43

1921 X 4617; Y 77611 taking rock sample - put into port aft milkcrate

1923 starboard cam show rock in port aft milkcrate

1924 computer shut down againrenamed File Body 4206B and set index to 0

1926 X 4618; Y 77611

Scans

1929 3-7 (electrode #2)

1932 8-13 (taken with electrode #1 which was not as good as electrode #2)

1934 14-18 (electrode #2)

1958 X 4676; Y 77587 - scans taken at colonization area -scans taken while in holder - scans 20?? – 32

2000 at colonization area (markers 11 and 8) – setting up for ECHEM

Scans

2001:40 32 - off scale

2002 33 - positioning sub

2003 34 - in colonization area

2004 36-47 - taken at 1 uA.....temp. on ECHEM temp probe = 25 C

2010 48-71 - taken at 10 uA - temp on ECHEM probe between 13 & 25 C

2020??? 72-81 taken at 100uA - taken after ECHEM put in holder...out of area
(note that offscale at 100nA)

2025??? 82-93 in holdertaken at 1 uA

2030??? 94-96.....in holder, taken as leaving area

2035??? 97-99.....taken at 1 uA in area near Io???

2040??? 100-103.....taken at 100 nA in area near Io???

2045???? 104-109.....taken in area near Io???

2051:18 X 4677; Y 77801 - taking major pair in hot water – black major pair

Scans

2053??? 110-114 - in holder....near vent where major pairs taken (see above)

2100:36 blue major pair in same orifice as black major pair taken above

2108 took gas tight (red, white and blue) in same orifice as major pairs above

2111:53 took gas tight (green) in same orifice as previous gas tight

2124 took white major pair in diffuse flow some distance from hot water above
– about 10 m from the Marker 11 and Marker 8 site...X 4683; Y 77608

