

NBP 93-1 Coring Summary

No.	Type	Latitude	Longitude	Location	Water Depth	RECOVERY		BAGS			Comments
						Main	Trigger	Main Core Barrel	Main Core Catcher	Trigger Core Catcher	
1	piston	62°06.1082'S	50°19.8850'W	Powell Basin-mid	3,420 m	0 cm	130 cm			TCC1-1,TCC1-2,TCC1-3	scope thought to be too short
2	gravity	66°14.18'S	57°57.44'W	Larsen Shelf- mid	332 m	139 cm			CC2-1		
3	gravity	66°13.80'S	58°14.09'W	Larsen Shelf- mid	330 m	36 cm		CB3-1			
4A	gravity	66°13.75'S	58°42.45'W	Larsen Shelf- mid	330 m	0 cm			CC4A-1, CCA-2, CC4A-3		
4B	gravity	66°13.57'S	58°42.59'W	Larsen Shelf- mid	319 m	0 cm		CB4B-1, CB4B-2, CB4B-3, CB4B-4	CC4B-1, CC4B-2, CC4B-3		
5A	gravity	66°12.16'S	59°9.58'W	Larsen Shelf- mid	349 m	0 cm		CB5A-1, CB5A-2			
5B	gravity	66°12.21'S	59°9.58'W	Larsen Shelf- mid	338 m	110 cm		CB5B-1, CB5B-2	CC5B-1		
6	gravity	66°13.2'S	59°51.87'W	Larsen Shelf- west	341 m	114 cm		CB6-1	CC6-1		
7A	gravity	65°51.53'S	59°43.73'W	Larsen Shelf- west, 600 ft from ice	428 m	0 cm		CB7A-1			
7B	gravity	65°51.57'S	59°43.79'W	Larsen Shelf- west, 600 ft from ice	420 m	0 cm		CB7B-1, CB7B-2			
8A	gravity	65°44.06'S	58°47.78'W	Larsen Shelf- west	352 m	0 cm		CB8A-1			
8B	gravity	65°44.043'S	58°47.8162'W	Larsen Shelf- west	339 m	50 cm		CB8B-1, CC8B-1			Began using modified flapper washed out near surface
9A	gravity	65°44.01'S	58°28.67'W	Larsen Shelf - mid	330 m	0 cm					
9B	gravity	65°44.1978'S	58°28.8684'W	Larsen Shelf - mid	330 m	0 cm		CB9B-1			washed out near surface
10	piston	65°46.24'S	56°2.79'W	Larsen Shelf - mid	330 m	226 cm	21 cm	CB10-1, CB10-2, CB10-3	CC10-1	TCC10-1	excellent penetration
11	piston	65°4.43'S	54°28.76'W	Larsen Slope	643 m	304 cm	78 cm	CB11-1	CC11-1, CC11-2	TCC11-1	excellent penetration
12	piston	65°5.08'S	54°48.83'W	Larsen Shelf edge	443 m	89 cm	0 cm	CB12-1	CC12-1, CC12-2	TCC12-1, TCC12-2	excellent penetration, liner imploded
13	piston	62°43.69'S	50°25.12'W	Powell Basin-middle	3406 m	416 cm	111 cm	CB13-1	CC13-1	TCC13-1, TCC13-2	excellent penetration

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Date JD 42 / 43
FEB 11/12 '93 Watchcrew SLOAN & STREETMAN
Station No. 01 Latitude 62°10'S Longitude 50°20'W
Type of Core: Piston ☒ Gravity ☐
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? yes Length of trigger core barrel 160cm (ft)
Length of trigger line 30' (ft) Length of scope line 30' (cm)

Station information

Time ship slowed to pull gear 2035Z JD 42
Time gear aboard ship 2217
Time of arrival on station 2310
Water Depth 4.5 (tw) 337.5 (m)
Sea state 8 ft rolling seas
Wind spd, direction 30 kt WNW Palmer facing into the wind? yes
Bottom relief flat - center of Powell Basin
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment Data are for second deployment; first did not trigger.

Time core lowered 0330Z JD 43
Water depth when core lowered 4.5 (tw) 337.5 (m)
Initial winch meter reading 0 m
Was a pinger used? No Meter reading when pinger attached _____
Time pinger attached _____ (important for battery recharges)

Penetration

Time at stop above bottom _____ Water depth _____
Time when core entered bottom 0417 Water depth _____
Latitude 62° 06.0182 Longitude 50° 19.8850 at penetration
Wire out 3527 meters Wire angle 0 ° aft 0 ° port

Retrieval

Time when pinger removed _____
Time when core at stern 0515Z Time when core on deck 0622Z
Time when ship underway 0730Z Heading of ship to next work 270°

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>up to weight</u>	<u>up to weight</u>
Length of mud lost on deck	<u>2 cm</u>	<u>2cm</u>
Total recovery in liner	<u>0</u>	<u>130 cm</u>
Position of piston	<u>full up</u>	
Type of sediments recovered	<u>grey mud</u>	

comments →

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments

Either slope was too short or ship rolled up just as core hit bottom. Larry thinks mud on bomb suggests core fell over on its side. I disagree.

- Ben

Bags -

TCC1-2 - trigger core catcher } soft grey
TCC1-3 - " " " } mud
TCC1-1 - tip of core catcher - 2cm

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

JD 55
Date 24 Feb 93 Watchcrew LAWVER, KELLER, SLOAN
Station No. C-02 Latitude 66°14.18' Longitude 57°57.44'
Type of Core: Piston Gravity X
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? No Length of trigger core barrel (ft)
Length of trigger line (ft) Length of scope line (cm)

Station information

Time ship slowed to pull gear 1945z
Time gear aboard ship 2125z
Time of arrival on station 2130z
Water Depth 1443 (tw) 332 (m)
Sea state flat
Wind spd, direction Palmer facing into the wind?
Bottom relief
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 2150z @ 50 m/min
Water depth when core lowered 1443 (tw) 332 (m)
Initial winch meter reading 0 m
Was a pinger used? No Meter reading when pinger attached
Time pinger attached (important for battery recharges)

Penetration

Time at stop above bottom 2205z Water depth 332 m
Time when core entered bottom 2205z Water depth 332 m
Latitude 66°14.18' Longitude 57°57.44' at penetration
Wire out 347 meters Wire angle 0 ° aft 0 ° port

Retrieval

Time when pinger removed
Time when core at stern 2212z Time when core on deck 2221z
Time when ship underway 2235z Heading of ship to next work 360°

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>140 cm</u>	<u> </u>
Length of mud lost on deck	<u>1 cm</u>	<u> </u>
Total recovery in liner	<u>139 cm</u>	<u> </u>
Position of piston	<u>-</u>	<u> </u>
Type of sediments recovered	<u>grey mud</u>	<u> </u>

OVER

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments

One bag collected - 1 cm of end that
fell on deck. Core catcher empty.

CC2-1 - tiny amount dk gry med hard clay/mud.

Speeding up winch speed on next core to get
better penetration.

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Date JD 55 24 FEB 93 Watchcrew LAWVER, SLOAN
Station No. C-03 Latitude 66° 13.94' Longitude 58° 14.42'
Type of Core: Piston Gravity X
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? No Length of trigger core barrel (ft)
Length of trigger line (ft) Length of scope line (cm)

Station information

Time ship slowed to pull gear 2310Z
Time gear aboard ship
Time of arrival on station 2324Z
Water Depth 0.452 (tw) 339 (m)
Sea state flat
Wind spd, direction < 10 kt Palmer facing into the wind? Yes
Bottom relief flat
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 2333Z @ 65 m/min
Water depth when core lowered 0.445 (tw) 330 m (m)
Initial winch meter reading 0
Was a pinger used? No Meter reading when pinger attached
Time pinger attached (important for battery recharges)

Penetration

Time at stop above bottom 2337Z Water depth 330m 4000 lb pullout
Time when core entered bottom 2337Z Water depth 330m
Latitude 66° 13.80' Longitude 58° 14.09' at penetration
Wire out 342 meters Wire angle ° aft ° port

Retrieval

Time when pinger removed
Time when core at stern 2346Z Time when core on deck 2356Z
Time when ship underway 2356Z Heading of ship to next work 270°

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>277 cm</u>	<u> </u>
Length of mud lost on deck	<u>0</u>	<u> </u>
Total recovery in liner	<u>36cm</u>	<u> </u>
Position of piston	<u>-</u>	<u> </u>
Type of sediments recovered	<u>grey mud w/</u>	<u>dropstone debris</u>

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments Bags

CB3-1 - mud removed from outside core barrel.
- med soft grey to olive green mud w/
dropstone debris.

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Date 25 FEB 93 JD 36 Watchcrew LAWVER & SLOAN
Station No. C-04a Latitude 66° 13.69' Longitude 58° 42.56'
Type of Core: Piston Gravity X
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? No Length of trigger core barrel (ft)
Length of trigger line (ft) Length of scope line (cm)

Station information

Time ship slowed to pull gear
Time gear aboard ship
Time of arrival on station 0107Z
Water Depth 0.435 (tw) 323 (m)
Sea state flat
Wind spd, direction < 10 kt Palmer facing into the wind? yes
Bottom relief flat
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 0119Z
Water depth when core lowered 0.435 (tw) 323m (m)
Initial winch meter reading 0
Was a pinger used? No Meter reading when pinger attached
Time pinger attached (important for battery recharges)

Penetration

Time at stop above bottom Water depth
Time when core entered bottom 0125Z Water depth 330m
Latitude 66° 13.75' Longitude 58° 42.45' at penetration
Wire out 333m meters Wire angle 0 ° aft 0 ° port

Retrieval

3,000 lbs pullout
Time when pinger removed
Time when core at stern 0135Z Time when core on deck 0139Z
Time when ship underway staying for another core Heading of ship to next work

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>40 cm</u>	<u> </u>
Length of mud lost on deck	<u>0</u>	<u> </u>
Total recovery in liner	<u>0</u>	<u> </u>
Position of piston	<u> </u>	<u> </u>
Type of sediments recovered	<u>grey mud; clay; drop debris; critter!</u>	

over →

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments Bags:

CC4A-1 - lt grey soft mud from top 6cm.
CC4A-2 - dk grey hard mud/clay from bottom 6cm
CC4A-3 CC+tip-top - top 1 of core catcher. lt grey soft mud.
Also - large black dropstone and sea slug.

Core repeated due to poor recovery. 4B

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Date JD56 25 Feb 93 Watchcrew SLOAN and LAWVER
Station No. C-04B Latitude 66° 13.4756' Longitude 58° 42.6394'
Type of Core: Piston Gravity ✓
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? Length of trigger core barrel (ft)
Length of trigger line (ft) Length of scope line (cm)

Station information

Time ship slowed to pull gear
Time gear aboard ship
Time of arrival on station see core 4A.
Water Depth 0.4 (twl) 328 (m)
Sea state flat
Wind spd, direction < 10 Kts Palmer facing into the wind? yes
Bottom relief
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 0201Z
Water depth when core lowered 0.43 (twl) 328 m (m)
Initial winch meter reading 1 meter
Was a pinger used? No Meter reading when pinger attached
Time pinger attached (important for battery recharges)

Penetration

Time at stop above bottom Water depth
Time when core entered bottom 0207Z Water depth 319 m
Latitude 66° 13.57' Longitude 58° 42.59' at penetration
Wire out 338m meters Wire angle 0 ° aft 0 ° port

Retrieval

Time when pinger removed
Time when core at stern 0212Z Time when core on deck 0216Z
Time when ship underway 0230Z Heading of ship to next work 275°

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>185cm</u>	<u> </u>
Length of mud lost on deck	<u>0</u>	<u> </u>
Total recovery in liner	<u>0</u>	<u> </u>
Position of piston	<u> </u>	<u> </u>
Type of sediments recovered	<u>grey mud & clay w/ drop debris</u>	

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments

Bags-

CC4B-1 - bottom 6 cm of core catcher. Dk grey
hard clay; very stiff.

CC4B-2 - top 6cm core catcher. Lt grey, soft
to med soft mud.

CB4B-1 - from core barrel outside.
med hard grey mud & clay w/
grit, sand, drop debris.

CB4B-2

"

CB4B-3

"

CC4B-3 - tip top 1 cm of core catcher; watery.
Soft grey mud w/ lots of sand, grit,
pebbles, dropstones up to 3cm across

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Date 25 Feb 93 Watchcrew LAWVER + SLOAN
 Station No. 5A Latitude 66° 12.23' S Longitude 59° 8.89 W
 Type of Core: Piston Gravity ✓

Number of Core barrels attached 1 Total Length 15'
 Was a trigger core used? No Length of trigger core barrel (ft)
 Length of trigger line (ft) Length of scope line (cm)

Station information

Time ship slowed to pull gear 0347Z
 Time gear aboard ship 0347Z
 Time of arrival on station 0348Z
 Water Depth 0.44s (tw) 330 (m)
 Sea state 2
 Wind spd, direction WSW 12kts Palmer facing into the wind? 280° Yes
 Bottom relief Flat
 List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 0353Z
 Water depth when core lowered 0.45 (tw) 337.5 (m)
 Initial winch meter reading 0
 Was a pinger used? No Meter reading when pinger attached
 Time pinger attached (important for battery recharges)

Penetration

Time at stop above bottom — Water depth —
 Time when core entered bottom 0359Z Water depth 349m
 Latitude 66° 12.16' S Longitude 59° 9.58' W at penetration
 Wire out 351 meters Wire angle 0 ° aft 0 ° port

Retrieval

3500 lbs
 Time when pinger removed —
 Time when core at stern 0405Z Time when core on deck 0411Z
 Time when ship underway staying Heading of ship to next work —

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>130cm Bcm</u>	<u>0</u>
Length of mud lost on deck	<u>0.1m</u>	<u>—</u>
Total recovery in liner	<u>0cm</u>	<u>—</u>

Position of piston

Type of sediments recovered No mud. Core flapper backwards!
Redoing to 5B.



R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments

Bags - CB5A-1 } mud from outer core barrel
 } -hard dark grey mud to clay with
CB5A-2 - drop debris, grit.

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Date JD 56 Watchcrew LAWVER + SLOAN
Station No. 5B Latitude 66° 12.27'S Longitude 59° 9.81'W
Type of Core: Piston Gravity ✓
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? NO Length of trigger core barrel (ft)
Length of trigger line (ft) Length of scope line (cm)

Station information

Time ship slowed to pull gear
Time gear aboard ship
Time of arrival on station 0430Z
Water Depth .45 (tw) 338 (m)
Sea state 2
Wind spd, direction 12 kts Palmer facing into the wind? 272°
Bottom relief Flat
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 0440Z
Water depth when core lowered 0.45 (tw) 350 (m)
Initial winch meter reading 0 m
Was a pinger used? NO Meter reading when pinger attached
Time pinger attached (important for battery recharges)

Penetration

Time at stop above bottom Water depth
Time when core entered bottom 0445Z Water depth 338m
Latitude 66° 12.21'S Longitude 59° 9.58'W at penetration
Wire out 351 meters Wire angle ° aft ° port

Retrieval

Time when pinger removed
Time when core at stern 0450Z Time when core on deck 0458Z
Time when ship underway 0505Z Heading of ship to next work 260°

Appraisal

	Main Core	Trigger Core	Core catcher
Length mud outside barrel	<u>410 cm</u>	<u> </u>	<u> </u>
Length of mud lost on deck	<u>0 cm</u>	<u> </u>	<u> </u>
Total recovery in liner	<u>110 cm</u>	<u>12 cm</u>	<u> </u>
Position of piston	<u> </u>	<u> </u>	<u> </u>
Type of sediments recovered	<u>grey mud, sand, grit, etc.</u>		

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments

Bags: CB5B-1 } soft grey mud w/ drop debris,
CB5B-2 } grit, etc from over core barrel.
CC5B-1: dark grey hard clay from
core catcher

comments on back

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Date JD 56 Watchcrew LAWVER & SLOAN
Station No. 6 Latitude 66° 13.24' Longitude 59° 51.78'
Type of Core: Piston Gravity ✓
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? No Length of trigger core barrel (ft)
Length of trigger line (ft) Length of scope line (cm)

Station information

Time ship slowed to pull gear 0650 Z
Time gear aboard ship
Time of arrival on station 0652 Z
Water Depth .465 (tw) 349 (m)
Sea state 2
Wind spd, direction < 10 kt Palmer facing into the wind? yes
Bottom relief flat but cut by channels nearby
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5, SCS

Deployment

Time core lowered 0702 Z
Water depth when core lowered 0.463 (tw) 348 (m)
Initial winch meter reading 0 m
Was a pinger used? No Meter reading when pinger attached
Time pinger attached (important for battery recharges)

Penetration

Time at stop above bottom Water depth
Time when core entered bottom 0707 Water depth 341 m
Latitude 66° 13.2' S Longitude 59° 51.87' W at penetration
Wire out 352 m meters Wire angle 0 ° aft 0 ° port

Retrieval

4000 lbs pullout

Time when pinger removed
Time when core at stern 0712 Z Time when core on deck 0717 Z
Time when ship underway 0735 Z Heading of ship to next work 175°

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>268 cm</u>	<u> </u>
Length of mud lost on deck	<u>0 cm</u>	<u> </u>
Total recovery in liner	<u>114 cm</u>	<u>6 cm</u>
Position of piston	<u> </u>	<u> </u>
Type of sediments recovered	<u>grey mud</u>	<u> </u>

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments

Bags - CBC-1 - med soft dk grey mud w/ quartz sand,
pebbles
CC6-1 - hard dk grey clay/mud.

CORING STATION REPORT

Date JD 56/57 25 Feb 92 Watchcrew LAWLER + SLOANStation No. D#7A Latitude 65° 51.40'S Longitude 59° 43.63'WType of Core: Piston Gravity ✓Number of Core barrels attached 1 Total Length 15'Was a trigger core used? No. Length of trigger core barrel (ft)Length of trigger line (ft) Length of scope line (cm)6000 ft
from
Larsen
ice
sheet!

Station information

Time ship slowed to pull gear 2310ZTime gear aboard ship 2325ZTime of arrival on station 2350ZWater Depth 0.566 (tw) 425 (m)Sea state FlatWind spd, direction < 5 kts Palmer facing into the wind? NoBottom relief Flat - at iceshelfList bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 0004 Z JD 57Water depth when core lowered 0.57 (tw) 428 (m)Initial winch meter reading 0 metersWas a pinger used? No Meter reading when pinger attached —Time pinger attached — (important for battery recharges)

Penetration

Time at stop above bottom — Water depth —Time when core entered bottom 21:10:45 Water depth 428 mLatitude 65° 51.53'S Longitude 59° 43.73'W at penetrationWire out 433 m meters Wire angle 0 ° aft 0 ° port

Retrieval

Time when pinger removed —Time when core at stern 0017Z Time when core on deck 0018ZTime when ship underway staying Heading of ship to next work —

Appraisal

Main Core

Trigger Core

Length mud outside barrel

145cm

Length of mud lost on deck

0cm

Total recovery in liner

0cm

Position of piston

—

Type of sediments recovered

dark grey mud to clay; hard.

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments

Bags- CB7A-1 mud off core barrel outside
dk gry med soft mud.

No recovery this core. Tryng again for #7B.

CORING STATION REPORT

Date 25 FEB 93/26 FEB Watchcrew LAWVER & SLOANStation No. D#7B Latitude 65° 51.62'S Longitude 59° 43.69'WType of Core: Piston _____ Gravity ☒Number of Core barrels attached 1 Total Length 15'Was a trigger core used? NO Length of trigger core barrel _____ (ft)

Length of trigger line _____ (ft) Length of scope line _____ (cm)

Station information

Time ship slowed to pull gear staying from 7A

Time gear aboard ship _____

Time of arrival on station 2340 ZWater Depth 0.56 (twl) 420 (m)Sea state FlatWind spd, direction < 5 kt Palmer facing into the wind? NoBottom relief Flat at ice shelfList bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 0041 ZWater depth when core lowered 0.56 (twl) 420 (m)Initial winch meter reading 0 mWas a pinger used? NO Meter reading when pinger attached _____

Time pinger attached _____ (important for battery recharges)

Penetration

Time at stop above bottom _____ Water depth _____

Time when core entered bottom 0048 Water depth 420 mLatitude 65° 51.57' Longitude 59° 43.79' at penetrationWire out 432 meters Wire angle 0 ° aft 0 ° port

Retrieval

Time when pinger removed _____

Time when core at stern 0054 Z Time when core on deck 0058 ZTime when ship underway 0115 Z Heading of ship to next work 75°

Appraisal

Main Core

Trigger Core

Length mud outside barrel

97 cm

Length of mud lost on deck

0 cm

Total recovery in liner

0

Position of piston

-

Type of sediments recovered

grey mud, drop debris from cone barrel.600 ft from
Larsen
Sheet.

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments Bags- CC7B-1 - light gray mud w/ drop debris; med soft
to hard; from core catcher.

CB 7B-1 - mud from outer core barrel.
lt gray mud w/ drop debris, grit;
med soft to hard.

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Date JD 57 26 Feb 93 Watchcrew Lawver + Sloan
Station No. 8A Latitude 65° 44.11' S Longitude 58° 47.49' W
Type of Core: Piston Gravity X
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? No Length of trigger core barrel (ft)
Length of trigger line (ft) Length of scope line (cm)

Station information

Time ship slowed to pull gear
Time gear aboard ship
Time of arrival on station 0420Z
Water Depth 0.465 (twl) 345 (m)
Sea state Flat
Wind spd, direction Palmer facing into the wind?
Bottom relief Bumpy
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 0453Z
Water depth when core lowered 0.46 (twl) 345 (m)
Initial winch meter reading 0
Was a pinger used? No Meter reading when pinger attached
Time pinger attached (important for battery recharges)

Penetration

Time at stop above bottom Water depth
Time when core entered bottom 0459Z Water depth 352m
Latitude 65° 44.06' S Longitude 58° 47.78' W at penetration
Wire out 352 m meters Wire angle 0 ° aft 0 ° port

Retrieval

2800165
Time when pinger removed
Time when core at stern 0505Z Time when core on deck 0510Z
Time when ship underway slaying Heading of ship to next work

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>120cm</u>	<u> </u>
Length of mud lost on deck	<u>0</u>	<u> </u>
Total recovery in liner	<u>0</u>	<u> </u>
Position of piston	<u> </u>	<u> </u>

Type of sediments recovered med grey soft mud from core barrel outsides

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CORING STATION REPORT

Comments Bags - CB8A-1 from extra core barrel. Small
amount of soft med gry mud; ~~med~~
grit, sand

No recovery possibly due to flapper
valve problems.

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Date 1857 26 Feb 93 Watchcrew LAWVER & SWAN
Station No. 8B Latitude 65° 44.11' S Longitude 58° 47.53' W
Type of Core: Piston _____ Gravity _____
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? No Length of trigger core barrel _____ (ft)
Length of trigger line _____ (ft) Length of scope line _____ (cm)

Station information

Time ship slowed to pull gear _____
Time gear aboard ship _____
Time of arrival on station -(see 8A)
Water Depth .452 (tw) 339 (m)
Sea state Flat
Wind spd, direction 5 kts Palmer facing into the wind? _____
Bottom relief Flat
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 0549Z
Water depth when core lowered 1.452 (tw) 339 (m)
Initial winch meter reading 0 m
Was a pinger used? No Meter reading when pinger attached _____
Time pinger attached _____ (important for battery recharges)

Penetration

Time at stop above bottom _____ Water depth _____
Time when core entered bottom 0554 Water depth 339 m
Latitude 65° 44.043' S Longitude 58° 47.8162' W at penetration
Wire out 352 meters Wire angle 0 ° aft 0 ° port

Retrieval

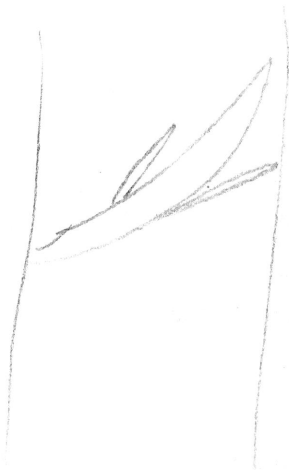
351m 2500 lbs
Time when pinger removed _____
Time when core at stern 0604Z Time when core on deck 0613Z
Time when ship underway 0640Z Heading of ship to next work 90°

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>130cm</u>	_____
Length of mud lost on deck	<u>0</u>	_____
Total recovery in liner	<u>50cm</u>	_____
Position of piston	<u>-</u>	_____
Type of sediments recovered	<u>med to dark</u>	<u>Mud, clay, drop debris.</u>

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments Bags - CB8B-1. small amount soft grey-green
med soft mud w/ grit, sand.
CC8B-1 6cm ^{med} hard grey clay/mud from
core catcher.
Large rock was lodged in
end, acting as flapper and
responsible for better
recovery this time.
Used modified flapper, but rock negated
test of it.



modified flapper has
spring on both sides.
outer one pushes off
wall. Inner one
catches on core trying
to slip by.

CORING STATION REPORT

Date JD 57 26 FEB 92 Watchcrew Shan & Wiederspahn

Station No. 9A Latitude 65°44.20'S Longitude 58°28.41' W

Type of Core: Piston Gravity X

Number of Core barrels attached 1 Total Length 15'

Was a trigger core used? No Length of trigger core barrel - (ft)

Length of trigger line - (ft) Length of scope line - (cm)

Station information

Time ship slowed to pull gear no gear

Time gear aboard ship -

Time of arrival on station 0705Z

Water Depth 0.44s (twl) 330 (m)

Sea state flat

Wind spd, direction < 5 kt Palmer facing into the wind? yes

Bottom relief flutish

List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz, SCS

Deployment

Time core lowered 0719Z

Water depth when core lowered .44 (twl) 330 (m)

Initial winch meter reading 0

Was a pinger used? No Meter reading when pinger attached -

Time pinger attached - (important for battery recharges)

Penetration

Time at stop above bottom - Water depth -

Time when core entered bottom 0724Z Water depth 330m

Latitude 65°44.01'S Longitude 58°28.67' W at penetration

Wire out 340m meters Wire angle -2 ° aft -2 ° port

Retrieval

Time when pinger removed -

Time when core at stern 0729Z Time when core on deck redone.

Time when ship underway staying Heading of ship to next work -

Appraisal

Main Core

Trigger Core

Length mud outside barrel 30cm

Length of mud lost on deck -

Total recovery in liner -

Position of piston -

Type of sediments recovered None

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments

Core was observed washing out at
surface; immediately redeployed.

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

JD57
Date 26 Feb 93 Watchcrew Sloan & Wiederspann
Station No. 93 Latitude 65° 44.2'S Longitude 58° 28.4'W
Type of Core: Piston Gravity X
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? No Length of trigger core barrel (ft)
Length of trigger line (ft) Length of scope line (cm)

Station information

Time ship slowed to pull gear on station -
Time gear aboard ship
Time of arrival on station
Water Depth .44 (tw) 330 (m)
Sea state flat
Wind spd, direction < 5 kt Palmer facing into the wind? yes
Bottom relief flat
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz, MCS

Deployment

Time core lowered 0737z
Water depth when core lowered .44 (tw) 330 m (m)
Initial winch meter reading 0
Was a pinger used? No Meter reading when pinger attached
Time pinger attached (important for battery recharges)

Penetration

Time at stop above bottom Water depth
Time when core entered bottom 0742z Water depth 330 m
Latitude 65° 44.1978'S Longitude 58° 28.8684'W at penetration
Wire out 342 m meters Wire angle -2 ° aft -2 ° port

Retrieval

Time when pinger removed
Time when core at stern 0752z Time when core on deck 0759z
Time when ship underway 0810 Heading of ship to next work 90°

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>135 cm</u>	<u> </u>
Length of mud lost on deck	<u> </u>	<u> </u>
Total recovery in liner	<u>0</u>	<u> </u>
Position of piston	<u> </u>	<u> </u>
Type of sediments recovered	<u> </u>	<u> </u>

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments

CB9B-1 - small quantity lt gray soft
mud w/ grit, sand, etc.

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

JD 57
Date 26 Feb 93 Watchcrew LAWREN + SLOAN
Station No. 10 Latitude 65° 46.19' S Longitude 56° 28.94' W *mid shelf*
Type of Core: Piston ☒ Gravity ☐
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? yes Length of trigger core barrel 4 (ft)
Length of trigger line 27' (ft) Length of scope line 18' (cm)

Station information

Time ship slowed to pull gear 2130 Z
Time gear aboard ship 2200 Z
Time of arrival on station 2230 Z
Water Depth .44 (tw) 330 (m)
Sea state
Wind spd, direction < 10 Kt Palmer facing into the wind? yes
Bottom relief flatish
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5, SCS

Deployment

Time core lowered 2254 Z
Water depth when core lowered 0.44 (tw) 330 (m)
Initial winch meter reading 0 meters
Was a pinger used? No Meter reading when pinger attached -
Time pinger attached - (important for battery recharges)

Penetration

Time at stop above bottom - Water depth -
Time when core entered bottom 2300 Water depth 330
Latitude 65° 46.24' S Longitude 56° 28.79' W at penetration
Wire out 334 meters Wire angle 0 ° aft 0 ° port

Retrieval

7000 lbs 333 m
Time when pinger removed -
Time when core at stern 2311 Z Time when core on deck 0052 Z JD 58
Time when ship underway 0102 Heading of ship to next work 90°

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>over bomb</u>	<u>over bomb</u>
Length of mud lost on deck	<u>-</u>	<u>-</u>
Total recovery in liner	<u>226 cm</u>	<u>21 cm</u>
Position of piston	<u>up</u>	<u> </u>
Type of sediments recovered	<u>grey mud w/ dropstone debris</u>	<u> </u>

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments 1st piston core after many bad gravity cores
Bags -
CB10-1 - full bag med grey / olive med soft mud with
grit, sand, drop debris from outside core barrel.
CB10-2 Full bag; as above; hard dry clay
CB10-3 - was hard to break in half for bagging!
TCC10-1 - 8 cm cylinder dk grey med soft
mud w/ varied drop debris.
CC10-1 - full bag med soft med grey
mud w/ varied drop debris from
main core catcher.

Still using modified flapper

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

JD 58
Date 27 Feb 93 Watchcrew LAWVER & SLOAN
Station No. 11 Latitude 65° 04.46' S Longitude 54° 28.90' W *upper slope*
Type of Core: Piston X Gravity _____
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? yes Length of trigger core barrel 130 cm (ft)
Length of trigger line 2730' (ft) Length of scope line 35' (cm)

Station information

Time ship slowed to pull gear 1500 Z
Time gear aboard ship 1530 Z
Time of arrival on station 1605 Z
Water Depth 0.84 (twl) 630 (m)
Sea state Flat
Wind spd, direction < 10 kt Palmer facing into the wind? yes
Bottom relief Slope
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz, SCS

Deployment

Time core lowered 1314 Z
Water depth when core lowered 0.858 (twl) 543 643 (m)
Initial winch meter reading 0 m
Was a pinger used? No Meter reading when pinger attached -
Time pinger attached - (important for battery recharges)

Penetration

Time at stop above bottom - Water depth -
Time when core entered bottom 1325 Z Water depth 643 m
Latitude 65° 4.43' S Longitude 54° 28.76' W at penetration
Wire out 648 meters Wire angle 0 ° aft 0 ° port

Retrieval

pullout: 642 m @ 5000 lbs.
Time when pinger removed _____
Time when core at stern 1643 Z Time when core on deck 1709 Z
Time when ship underway 1715 Z Heading of ship to next work 270°

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>over bomb</u>	<u>over bomb</u>
Length of mud lost on deck	<u>0</u>	<u>0</u>
Total recovery in liner	<u>304 cm</u>	<u>78 cm</u>
Position of piston	<u>up</u>	<u>-</u>
Type of sediments recovered	<u>soft lt grey mud w/ much grit, sand, etc.</u>	

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments

Pack ice appears to be heavy just beyond shelf edge. These sediments ought to have much more drop debris (which they appear to) and not have been compacted by ice, as on shelf.
Bags- CB11-1 - full grey/dk grey mud from outside main core barrel. Lots of grit, sand, pebbles, etc.
No hard mud as before.

TCC11-1 - very base of trigger core catcher
med soft med grey mud full of grit, sand

TCC11-2 - top 6cm soft med dk grey soft mud.

CC11-1 - 8 cm cylinder from base of main core catcher. Stiff grey/dk grey clay/mud.

CC11-2 - top 6cm from main core catcher.
as CC11.

Somebody did not use the flapper on the trigger core catcher!

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

JD 58
Date 27 Feb 93 Watchcrew LAWVER + SLOAN
Station No. 12 Latitude 65° 5.10' S Longitude 54° 48.74' W
Type of Core: Piston 1 Gravity _____
Number of Core barrels attached 1 Total Length 15'
Was a trigger core used? yes Length of trigger core barrel 5 (ft)
Length of trigger line 327 (ft) Length of scope line 35' (cm)

Station information

Time ship slowed to pull gear no gear
Time gear aboard ship _____
Time of arrival on station 1820Z
Water Depth 443m (tw) 0.595 (m)
Sea state Flat - snowing
Wind spd, direction < 5kt Palmer facing into the wind? no wind
Bottom relief Flat - top of slope - shelf edge.
List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 1839Z
Water depth when core lowered 0.595 (tw) 443 (m)
Initial winch meter reading 0 m
Was a pinger used? No Meter reading when pinger attached No
Time pinger attached _____ (important for battery recharges)

Penetration

Time at stop above bottom _____ Water depth _____
Time when core entered bottom 1848Z Water depth 443m
Latitude 65° 50.8' S Longitude 54° 48.83' W at penetration
Wire out 452 meters Wire angle 0 ° aft -5 ° port

Retrieval

444m 5500 lbs. slip ballasted with port line
Time when pinger removed _____
Time when core at stern 1904Z Time when core on deck 1920Z
Time when ship underway 1940Z Heading of ship to next work 3450

Appraisal

	Main Core	Trigger Core
Length mud outside barrel	<u>over bomb</u>	<u>over bomb</u>
Length of mud lost on deck	<u>0</u>	<u>0</u>
Total recovery in liner	<u>89 cm</u>	<u>0 cm</u> liner imploded.
Position of piston	<u>up</u>	<u>-</u>
Type of sediments recovered	<u>stiff dk grey mud w/ drop debris</u>	

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Bags of sediment collected from outer main core barrel (cb), outer trigger core barrel (tcb), main core catcher (cc), or trigger core catcher (tcc)

Bag Number

Description of contents

CB12-1

full bag soft dk grey mud w/
grit, sand, etc. drop debris.

CC12-1

bottom 6 cm; stiff dk grey
clay; fairly dry; cylindrical sample.

CC12-2

top 6 cm. - as above -

TCC12-1

bottom 8 cm med stiff med dark
grey mud/clay.

TCC12-2

top 3 cm soft lt grey mud w/
a great deal of grit, pebbles, sand, etc.
interpreted as drop debris.

Comments

Liner mutilated. Base splintered near top of
recovered core (main core therefore in two
pieces). Big hole near top of liner.

Interpretation - underpressured air bubble from
core catcher traveled up liner and
blew out at top. Lesson - don't use
modified flapper and don't insert piston
all the way when loading it into end
of liner/barrel.

Used regular flapper.

CORING STATION REPORT

Date JD 68/69 09 MAR 93 - 10 MAR 93 Watchcrew 1 MUIR & SLOAN

Station No. 13 Latitude -62°42.7548' Longitude -50°24.6456

Type of Core: Piston X Gravity

Number of Core barrels attached 1 Total Length 15'

Was a trigger core used? yes Length of trigger core barrel 4 (ft)

Length of trigger line 30' (ft) Length of scope line (cm)

Station information

Time ship slowed to pull gear

Time gear aboard ship

Time of arrival on station 0120z

Water Depth 4.54 (tw) 3406 (m)

Sea state windy

Wind spd, direction 20 kts Palmer facing into the wind? yes

Bottom relief flat

List bottom data (3.5 kHz, 12 kHz, SCS) 3.5 kHz

Deployment

Time core lowered 1225z JD 68 50 m/min

Water depth when core lowered 4.54 (tw) 3406 (m)

Initial winch meter reading 0

Was a pinger used? No Meter reading when pinger attached -

Time pinger attached - (important for battery recharges)

Penetration

Time at stop above bottom - Water depth -

Time when core entered bottom 0129z JD 69 Water depth 3406 m

Latitude 62°43.68'S Longitude 50°25.12'W at penetration

Wire out 3529 meters Wire angle -5 ° aft +5 ° port

Retrieval

Time when pinger removed - 10,000 # pullout!

Time when core at stern 0237z Time when core on deck 0252

Time when ship underway 0/s Heading of ship to next work -

Appraisal

Main Core

Trigger Core

Length mud outside barrel

over bomb

over bomb

Length of mud lost on deck

zero

zero

Total recovery in liner

416 cm

111 cm

Position of piston

-

-

Type of sediments recovered

soft grey mud.

R/V Nathaniel B. Palmer 93-1
CORING STATION REPORT

Comments Excellent core. Accidentally used modified
flapper. i. Probably scored core margin.

Bags- CB13-1 - soft lt grey mud from outer core
barrel. Very little recovered

CC13-1 - 5 cm dk gry soft mud: main core catcher

TCC13-1 - base of trigger core catcher which
fell on deck but maintained integrity.
10 cm lt gry mud soft mud.

TCC13.2 - 6 cm lt gry med soft mud from
trigger core catcher.