USGS DREDGE LOG

4-100m

Depth Interval 2315-2020m

Julian Date ~~[illegible]~~ 300

Cruise I.D. F11-90-CP

Local Date (m/d/y) 10-27-90

Station No. 7

Chief Scientist Hein / Ahn

Dredge No. 7

Tech on Watch Rideout / MOSTLY OLSON

dredge bag was estimated to be at this depth when we started hauling in

No signifant bites after that

1240
1300

4178
1200
2978

	On Station	Dredge on Btm	Dredge off btm	Off Station
GMT	0000	0053	0418	0455
LATITUDE	10 59.31 N	10 59.17	10 57.57	1057.57
LONGITUDE	138. 31.34 E	138 31.43	138 32.99	13832.30
WATER DEPTH	2380	2315	2055	—

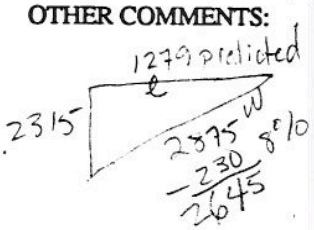
Site Description and Target : VAP C Upper Slope Surveyed on Line #15

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
IN WATER	0006					
ON BOTTOM	0052	2315 m	2420 m			Letting out scope
Slope is out	0103	2275	2875			Moving up line
Bites	0134	2195		1.5-1.7		starting to dredge?
Bite	0144			1.9		/
Bite	0147			2.2		
Bite	0151	2135		1.2-2.3		
"	0153			2.0		
	0157	2120		2.5, 2.13		
	0158			2.6, 2.1		
	0200			2.3, 2.3		
	0202	2110		2.3, 2.7		
	0205			2.55		~~[illegible]~~!
	0208			2.3		
	0217	2080		2.2		
	0220			2.17		
	0221	2075		2.49-2.54		
	0233	2050		2.5		

*on/off bottom, bites, etc.

OTHER COMMENTS:

OVER



1279 predicted

2315 ℓ W

2875
-230
2645

8%

w^2 6996025 (less 8%)

d^2 -5359225

ℓ^2 1636800

ℓ = 1279

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
Bites	0242	2045	2675	244-3.25		
"	0243			2.70		
"	0245			3.07		
"	0246	2035		2.70		
"	0249			3.53		
"	0252	2020		2.65		
"	0253			2.41		
"	0254		2.49	3.64		
"	0255			3.19		
"	0256	2020	2.44	2.96, 3.09		
"	0312	2005		2.50		
"	0315	2000		2.35		
"	0318		2.19	2.23		
"	0321	1970		2.20 - 2.24, 2.41, 2.37		
"	0323	1960		3.15, 3.49		
Pull again	0329	1920				small nubbles at 1.20
Bite "	0400	1990	2365	2.13, 2.21		Still Pulling up
" "	0403			2.12		

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
" "	0404	2005		2.13		
" "	0406	2010	2350	2.13		
" "	0407			2.24		
" "	0409	2020	2200	2.18, 2.21, 2.22, 2.17		
" "	0411	2030		2.23, 2.20, 2.26, 2.27, 2.20		
" "	0413	2035	2125	2.28, 2.21		
	0417					small bits < 2.20
Off Bottom	0418	2055	2035			Not sharp
On Deck	0456	2275				1/2 bag

*on/off bottom, bites, etc.

OTHER COMMENTS:

USGS DREDGE LOG

Depth Interval 1500 - 2000

Julian Date 300

Cruise I.D. F11-90-CP

Local Date (m/d/y) 10-28-90

Station No. 8

Chief Scientist Hein/Ahn

Dredge No. 8

Tech on Watch Rideout

	On Station	Dredge on Btm	Dredge off btm	Off Station
GMT	1415	1754	2002	2251
LATITUDE	10 00.04 N	10 00.00 N	09 59.97 N	10 00.25 N
LONGITUDE	138 11.97E	138 12.37E	138 13.23 E	138° 15.95E
WATER DEPTH	2100	2000	1425	820

Site Description and Target : Hunters Bank Western Slope 2000 to 1500 m

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
IN WATER	1719	2400				moving up to 2000m as dredge
	1731		1200m			going down
[illegible]	1754	2000	2380m	Moving ahead slowly		because boosthuster down
	1800		2450 total scope		out;	continuing up slope slowly
	—	1840				Nibbles starting to begin
	1816					1.8
	1819					Steady increase in tension
	1830	1830				1.9 - 2.0 small bites
	1835	1750			Taking on a	little tension, nibbles
	1835				more nibbles	
	1838			building	tension	1.9, 1.8
	1852	1720	pulling wire in slowly.			
	1855		2400 - small nibbles < 1.9 slowly			pouring in
	1857	1670				3.01 ←
	1858					2.07 ←
	1902	1670	2300 m still pulling		in	
	1903	1650	2268			3.4 ←
	1906		2215			2.8 ←

*on/off bottom, bites, etc.

OTHER COMMENTS:

1704 ON BOTTOM

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
	1910	1630	2125	2.0	Builds	up to 2 and breaks off
			2100	Stopping	the pay	in to max up line
	1913	1630	2100			2.7 Breaks off
	1916			paying in	to 2000	meters wire
	1920		2000	holding	scope at	2000 m wire
	1929		Paying out	to 2100	m	?
	1935	1470	picking up	tension	~2 ton	
Bite						2.3
	1943	1410	1965			2.4
	1944	}	1957			~2 steady pull
	1946		1900			
	1952	1415	1780			
	1956		1630			pulling it in
	1957	1400	1600			
OFF BOTTOM	2001	1425				OFF

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS

*on/off bottom, bites, etc.

OTHER COMMENTS:

USGS DREDGE LOG

Depth Interval 820 - 760

Julian Date 300

Cruise I.D. FI-90-CP

Local Date (m/d/y) 10 - 28 - 90

Station No. 8

Chief Scientist Heirt / Ahm

Dredge No. 9

Tech on Watch Rideout

	On Station	Dredge on Btm	Dredge off btm	Off Station
GMT	1415	2150	2230	2251
LATITUDE	10 00.04N	10 00.00N	10 00.2N	10 00.25N
LONGITUDE	138 11.97E	138 15.18E	138 15.69E	138 15.95E
WATER DEPTH	2100	824	770	820

Site Description and Target : Top of basin across flat and up far pinnacle 830m and up pinnacle ~ 790m

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
[illegible]	2055	960	Pulling back until we reach correct depth			
	2146	820m				
ON BOTTOM	2150	824m	827m			
	2155	821	1066 m			Full scope out
	2205	820				Tension up 0.7 to 1
BITE	2208	818				1.3
	2210	818				.8 to 1, steadily jumping up to 1 and down
	2211	815				1.13
	2213					1.17
	2214					1.32
						1.23
SHIFT STOPING	2219	760	OVER TOP OF FAR PINNACLE, WINCH WIRE IN			
	2221	—	976			1.1
	2224	770	830			1.0 Holding tension
	2230	OFF BOTTOM BUT DID NOT SEE TENSION DROP				
	1	770				

*on/off bottom, bites, etc.

OTHER COMMENTS:

USGS DREDGE LOG

Depth Interval 1380-1300

Cruise I.D. F11-90-CP

Station No. 9

Dredge No. 10

Julian Date 301

Local Date (m/d/y) 10-28-90

Chief Scientist Hein/Ahn

Tech on Watch Walter

	On Station	Dredge on Btm	Dredge off btm	Off Station
GMT	0904	0932	1145	1210
LATITUDE	8°53.69	8°53.60	8°52.70	8°52.94
LONGITUDE	137 43.52	137 43.71	137 43.66	137°43.22
WATER DEPTH	1425	1380	1300	—

Site Description and Target : Steep slope of west side → had to go off line when pulling bites to get off bites. May have ended up pulling it diagonally across slope hence little decrease in depth

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
On bottom	0932	1380	1490			Putting out scope
Scope is out	0937	1335	1800			Moving up line
Bites	1002	1200m		1.4, 1.4		Starting to get bites
	1004			1.4		
	1010	1150		1.4, 1.4		
	1011	1150		1.4		
	1014	1135		1.4, 1.4		
	1018	1130		1.4, 1.4, 1.4		
	1022	1100		1.4, 1.4		
	1023			1.4		
	1024	1090		1.4		
	1025			1.5, 1.4, 1.6		
	1027			1.5, 1.4		
	1028		1800	1.5		
Hung up	1030	1070	1820	3.98 → pulled		up to 5T
Pulling with ship	1035			6.9		Broke off
Bites	1044			1.6, 1.6		
Bite	1047	1130	1820	1.6		

Constant tension

*on/off bottom, bites, etc.

OTHER COMMENTS:

(over)

915 = √

2,742,336
1,904,400
837936

edge should be 900m behind ship

1380

1800-890 = 1656

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
Bites	1048	1130	1820	1.7, 1.7		
Hung up	1050	1125				
Bite	1102	1110		1.7, 1.8		
Bite	1106	1090		1.77, 1.76		
"	1110			1.80		
"	1115	1075		1.9, 2.04		
"	1116		1820	2.07		Starting to bring it
Bite	1118	1060		2.8		
	1120		1800	2.2		
Bites	1121			2.1, 2.1, 2.2, 2.1		
"	1122	1075		2.0, 1.9, 2.0, 1.9		
	1123			2.0, 1.9,	1.9, 1.9	
	1125			1.8, 1.8		
	1126			1.7, 2.2		
	1127			2.2		
	1128	1145		1.7, 1.9		
	1129	1150	1630	1.8		
	1136	1270	1460	1.52, 1.4		

Constant tension is ~1.5 higher than earlier

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
	1139	1230		1.50		
	1140		1400	1.52		
	1142	1260		1.53		
	1144	1280	1320	1.5, 1.5, 1.5		
Off bottom	1145	1290	1290			

*on/off bottom, bites, etc.

OTHER COMMENTS:

USGS DREDGE LOG

Depth Interval 2300 - 2280 | Julian Date 301

Cruise I.D. F11-90-CP | Local Date (m/d/y) 10-29-90

Station No. 9 | Chief Scientist Hein / Ahn

Dredge No. 11 | Tech on Watch Rideout

	On Station	Dredge on Btm	Dredge off btm	Off Station
GMT	0904	1414	1641	2025
LATITUDE	08 53.69N	08° 55.51	08°54.90 N	08°54.90 N
LONGITUDE	137 43.52E	137° 40.93	137°41.09 E	137°40.97E
WATER DEPTH		2380	2260	

Site Description and Target : Deeper water on Yap D; ~ 2400 meters and up slope from there; Datable Basalts

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
	1352	2625	2500 m			moving up line to hit bot
	1411	2300	2500m +			slowing down & paying out.
On Bottom	1414	2380	2630			scoping out 2800m wire
	1422		2850			holding wire out here
	1428	2360	2850	1.6		weight of gear
	1436	2320		1.7		slight drag
	1442	2290		1.7 - 1.8		AVG tension
Turning ship	1500					turning to allow paying in
	1508	2240		bring in	100 meters	tension 1.9 to 2.10 tons
	1517	2230	2750	Holding Slope here		
Pick up Tension	1524	2230		1.7 - 1.8		
	1525			2.0 - 2.16		Up to 2 when ship heaves
Bite	1536			2.2		
	1541	2210		2.5		
Bite	1546			3.3		
Bite	1549			3.0		
	1550		2760	4.2 & Holding - Caught up - swinging around		
Bite	1600		2762	6.2	let 4 m	of wire out started to 2 tons being weighed back up

*on/off bottom, bites, etc.

OTHER COMMENTS:

Strong current here making dredging difficult wire falling under ship

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
Stuck up	1601	2207	2762	3.0		Hung back up in same spot
Bite	1602	2205	2762	4.2		Broke off
Bite - Building Tension	1609	2205		2.6, up to 3.0		Broke off at 2.9
Bite	1610	2205		2.0		
Bite	1613	2205		2.75		
Bite	1614			2.9		
Wire In	1615					Start to pull it in wire
				2.5		
Hung Up	1617			3.9		SHARP TUG
	1618	2200	2700	5.0		HOLDING
	1624		2672	up to 6.0	Holding Fast, backing down w/ship	
	1625		2663 to 2654	5.5		
	1628		2648	5.0		
	1629		2640	6.0		
	1630		2620	6.0		
	1632	2205	2610	6.0		
Broke	1633	2205	2585	5.8		
Bite	1634	2220	2560	4.0		

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
Pulling It In	1635	2230	2500			
	1637	2245	2400			
OFF BOTTOM	1641	2270	2260			

*on/off bottom, bites, etc.

OTHER COMMENTS:

USGS DREDGE LOG

Depth Interval _____ Julian Date 302

Cruise I.D. F11-90-CP Local Date (m/d/y) 10-30-90

Station No. 10 Chief Scientist Hein / Ahn

Dredge No. 12 Tech on Watch Rideout

	On Station	Dredge on Btm	Dredge off btm	Off Station
GMT	1937	2314	0140	0215
LATITUDE	08° 42.47 N	08° 43.47 N	8 41.60	08° 41.92
LONGITUDE	138° 53.0 E	138° 53.04 E	138 53.03	138° 53.13
WATER DEPTH	2370	2660	1835	—

Site Description and Target : North slope of VAP-E 2600 m up to 2500 m

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
IN WATER	2210	2585				—
Bottom	2314	2660	2640	—	—	—
Full Scale	2327	2625	3200			Starting tension [illegible]
	2349	2555		1.6	steady	
~ 500 [illegible]	2350	2500			Live tension [illegible]	
	0016	2450		2.0	Steady	tension
Bite	0021	~ 2410		2.5	—	—
Bite	0028	2360		2.2		
Bite	0029	2250		2.7		
[illegible]	0030	2250		~ 2.0		
Bite		2250		2.3		
Bite	0032	2230		2.3		
Bite	0032	2230		2.4		
Lots of Sm. Bites	0033	2230		~2.0		
Bite	0034	2220		2.4		Hauling in
	1113		2500			Tension varies btw 1.8 & 2.
Off bottom	0140	1835	1800	—		
UP no rocks	0213					

*on/off bottom, bites, etc.

OTHER COMMENTS:

USGS DREDGE LOG

Depth Interval 3000-2700

Julian Date 303

Cruise I.D. F11-90-CP

Local Date (m/d/y) 10-30-90

Station No. 11

Chief Scientist Hein/Ahn

Dredge No. 13

Tech on Watch Walter

	On Station	Dredge on Btm	Dredge off btm	Off Station
GMT	0757	0405	0638	0740
LATITUDE	844.63	8 45.06	8°45.1	8°44.8
LONGITUDE	138 53.02	138° 52.96	138°53.6	138 54.3
WATER DEPTH	3230	3000	2930	—

Site Description and Target : Seamount - dredging up the south flank from the base (3000). Ship went over the peak - dredge bag probably went to 2700 m

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
D13 in water	0259	3230				Putting out wire/moving up slope
On bottom	0405	3000	3140			Putting out scope
Scope is out	0418	2830	3800			Moving up line
Bites- Getting a few	0430					very small
Bite	0441	2670		2.1		
	0444	2660		2.11		
	0447	2650		2.26		
	0450			2.17		
	453			2.6		
	454	2630		2.6, 2.3, 2.5, 2.3		
	455			2.3		
	456			2.3		
	457			2.7, 2.6, 2.4		
	458			2.6, 2.6		
	459			2.6, 2.4	2.5	
	501	2625		2.9, 2.8		
Reached peak	505	2625		3.7, 2.8		2140 along
	508	2635		3.6		

*on/off bottom, bites, etc.

OTHER COMMENTS:

$\ell = 1350$

9000000
7166329
$\ell^2 = 1833671$

(2400 along)

3000 d

3000 = w
8.5%
2677

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
Bite	0511	2635	3800	3.7		
Bite	0513			3.7, 3.3		
Bite	0515			3.6, 3.7		
Bite	0516			2.8, 3.6		
	0518			3.7		
	059			4.1		
Hung up	0521	2655	3800	4.6		Slipped off
Hung up	0523	2640				
Still hung	0552					backing down
	0622			>5		
	0627	2865	3100			
Off Bottom	0638	2930	2875			

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS

*on/off bottom, bites, etc.

OTHER COMMENTS:

USGS DREDGE LOG

Depth Interval 2700 - 2500

Julian Date 303

Cruise I.D. F11-90-CP

Local Date (m/d/y) 10-31-90

Station No. 12

Chief Scientist Hein/Ahn

Dredge No. 14

Tech on Watch Rideout

	On Station	Dredge on Btm	Dredge off btm	Off Station
GMT	1645	1748	2132	2230
LATITUDE	09°31.64'	09°31.63'	09° 31.63	09°32.11 N
LONGITUDE	143°17.96'	140°17.95'	140° 17.95	140°19.58 E
WATER DEPTH	2730	2740	1880	2007

Site Description and Target : Yap F; Western Scarp of block faulted Seamount (spreading center, backarc?)

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
In Water	1654	2700	—			
Bottom	1748	2740	2740			
	1751	2740	3000	1.6-1.75		
	1758		3300	1.6-1.8		
	1838	≈ 2900	3300	1.8	036	
	1845			1.9		SLOWLY INCREASING TENSI
	1900		3400	1.7-1.9	010	NO BITES YET
	1910	~2700		2.0		NO STRONG PULLS YET
	1915	~2700		2.0		HOLDING AT 2.0
	1922	~2700		2.1		HOLDING BUT NO BITES
	1926			2.2		SLOWLY RISING STEADY TENSION
[illegible]	1929	~2600		2.3		AVERAGE TENSION
[illegible]	1936			1.9-2.4		SLOWLY TAKING IN WIRE TO 3100
	1959	2450	[illegible]	2.0 steady		going to pull in 100 m
	2006	2430	3100			
	2011	2300				[illegible] 2900m
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	2020	2350	2425			leaving wire out at this distance for a while

*on/off bottom, bites, etc.

OTHER COMMENTS:

2925

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS
—	2024	2340.	2925	2.0	holding steady tension	
Bite	2030	2305		2.4		
Bite	2037	2300		2.7		
Bite	2051	2175		2.4		hang up
Bite	2054	2155		3.1		broke off
Bite	2102	2140		2.4		
Bite	2105	2130		2.3, 2.6		
Bite	2108	2030		2.5		
Hung Up	2110	2020		3.8, 4.0		
Bite	2113	2010		4.0		
Bite	2117	2000		2.9		
Take in Wire	2119	2000				
Bite	2121	1970.	2800	3.2		
Bite	2130	1920	2600	4.0		
Bite	2131	1915	~2590	3.1		
OFF BOTTOM	2132	1880	~2500			

OPERATION*	GMT	DEPTH (m)	WIRE OUT (m)	TENSION	HDG/SPD	COMMENTS

*on/off bottom, bites, etc.

OTHER COMMENTS: probably dredging oblique to the slope. Bottom Traces fade out as new ones fade in above. Many traces are visible on both records, although one is generally prominant