PROTOCOL DREDGE [redacted] 1 27

Cruise No. SO 37	Stat. No. Equipm. 18 DKS	Location III	Area I
Date 25.5 1985	Protocol written by : Sahler / Flemming		

Pinger on wire 300 m from dredge Kettensackdredge

	Time GMT	Latit. N	Longit. W	Water depth	Wire length	Tension (t)	Remarks
begin operation	20^{10}	15°39.08	170°25.39	2270	0	0	
begin lowering	20^{12}	15°39.09	170°25.38	2260	0	0	
+ bottom contact	21^{00}	15°38.93	170°24.82	2180	2250	–	
Winde STOP, Schiff nimmt Fahrt auf, 80°	21^{07}	– " –	– " –	2184	2399	–	
50 m fieren auf 2450 Seillänge	21^{12}	15°38.96	170°24.63	2140	2399	1.8	
	21^{16}	15°38.98	170°24.60	2100	2450	2.4	
20 m fieren auf 2470 m	21^{17}	– " –	– " –	– " –	2450		
Fahrt verlangsamt, da Dredge offensichtlich fliegt, Pinger 30 m über Grund	21^{19}				2470	2.3	
10 m fieren auf 2480 m	21^{26}	15°39.05	170°24.51	2000	2480 m	2.0	
10 m fieren auf 2490 m	21^{34}	15°39.09	170°24.42	1920	2490 m	2.0	
10 m fieren auf 2500 m	21^{40}	15°39.10	170°24.38	1890	2500	2.2	
langsam Heven	21^{42}	– " –	– " –	1890	2500	2.8	
	21^{44}	15°39.10	170°24.33	1895	2440	3.4	
20 m fieren auf 2460	21^{51}	15°39.14	170°24.21	1800	2460	2.5	
langsam Heven	21^{57}	15°39.15	170°24.11	1770			
	22^{03}	15°39.18	170°24.05	1750	2365	4.8	
Dredge hängt	22^{04}	– " –	– " –	1730	2336	6.4	
Dredge frei	22^{16}	15°39.21	170°24.02	1760	2120	6.4	
begin heaving	22^{18}	– " –	– " –	1800	2090		
end heaving							
end operation							

+Corrected data 15°38.96'N 170°24.76'W

ship course 80° calcul. mean water depth.....m

total time of bottom contact.....min ship velocity.....kts

bottom topography ..... length of dredge section .....m

Result

....kg Total ....kg Substrate

....kg Nodules ....kg Sediment

18 DS

Station Data

Pinger on wire 300m above dredge

	Time (GMT)	Lat. N	Long. W	Water Depth	Wire Length	Tension
Begin Operation	20:10	15°39'08	170°25'39"	2270	0	0
Begin Lowering	20:12	15°39'09"	170°25'38"	2260	0	0
1st bottom contact	21:00	15°38'93"	170°24'92"	2180	2250	—
Dredge hung up	22:21	15°39'19"	170°24'04	1825	2062	7.8
Dredge freed	22:27	15°39'09"	170°24'05"	1811	2010	7.8
Begin heaving	22:32	15°39'12"	170°23'96"	1796	1780	—
End heaving	23:11	15°39'31"	170°23'67"	1690	—	—
End operation	23:20	—	—	—	—	—

Ship course 80°

Total time of bottom contact 27 min

100 kg. recovery; 40 kg crusts; 60 kg substrates

~95% talus

% covered by Mn — 100%

Nodules

max thickness: 10 cm
min thickness 0.3 cm } 4 cm avge.

Surf. texture ~70% botryoidal, ~30% granular

encrusting organisms on ~10%

~3 generations internal growth

2 photos of dredge

Substrates. phosphorite
andesite
" volcanogenic Breccia

1	2	3
Rock Type: Hornblende Andesite(?)	Andesite(?) Volcanogenic Breccia	Phosphorite
Color: Dark Brownish-gray (5YR3/1)	Samples	Samples
Texture: Phyric Intergranular		
Phenocrysts: Amphibole (?) ±5, ±1mm dia (Hornblende?) Plagioclase(?), ±10%, ±1mm dia (single pxts) Pyroxene (augite?) ±10%, ±1mm dia		
Groundmass: Not determined (beyond resolution)		
Vesicles: % – ±10% Size: – ±1mm dia. auge Shape: – irregular Filling: – zeolite (phillipsite?) (±90% of vesicles are filled)	Missing	Missing
Alteration: moderate (Oxidation of mafics in gdm, zeolitization, smectitization)		
Remarks: very abundant (most?) constituent of substrate in dredge, abundant dark green px, strange-looking plagioclase(?) (easy to confuse w/ amygdules in hand specimen, matrix constituent(?) of volcanogenic breccia cemented w/ porous, pale orange phosphorite(?) (several samples of lithologies from this dredge apparently missing) very directed texture (flow structure). Serves as substrate for 2-generation (oil-dense, laminar, young, porous, dendritic, Fe(ODH)?: rich in surface texture subdued botryoidal w/ botryoidal superto pography – total thickness: several cm)		

Sample No: S03718 DS4
Rock Type: Alkalic(?) Basalt
Color: Dark Gray (N3)
Texture: Intergranular
Phenocrysts: absent
Groundmass: Beyond resolution in hand specimen
Vesicles: (variable) 5–35%
Shape: rounded, irregular
Size: ±1 mm dia auge
Filling: (100%) Smectite

Alteration: superficial (smectitization?)
Remarks: One small, angular fragment found perhaps not from this dredge, but is not like anything from any other dredges close by.