

Data Report 15

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**SEDIMENTARY ROCKS FROM THE CONTINENTAL SHELF
AND SLOPE OFF THE CENTRAL COAST OF OREGON**

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SEDIMENTARY ROCKS FROM THE CONTINENTAL SHELF AND SLOPE OFF THE CENTRAL COAST OF OREGON

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During the period from July 1961 to September 1963, rocks were collected from 138 different locations on the continental shelf and slope off the central coast of Oregon by the Department of Oceanography, Oregon State University. The sample locations, types of samplers, and general lithologies for all of the samples are listed in Table 1. The sample positions are plotted in Figure 1.

In Table 1 the samples are numbered consecutively according to their geographic position. The OSU Sample Number, by which the sample is filed at the Department of Oceanography, is given also. Two locations are listed for those samples collected by dragging a dredge along the bottom for some distance. The two positions indicate the start and finish of the dredge haul. Other types of samples have only one location listed. Positions are based on navigation by loran or by radar. The approximate depths from which the samples were taken can be estimated from the contours in Figure 1.

Gravity corers, grab samplers, and a variety of dredges were used to collect the rocks. The gravity corer was allowed to fall free into the bottom. The weight of the instrument (about 50 pounds) was sufficient to drive the core barrel 3 to 4 inches into soft rock. The grab sampler used was a Dietz-Lafond "snapper" type and was successful in collecting rocks lying loose on the bottom. Four types of dredges were employed: The anchor dredge and the otter trawl are primarily biological dredges; the frame or Agassiz dredge is used both by geologists and biologists; and the pipe dredge, designed for collecting rocks, is employed almost solely by geologists. In essence, all of the dredges are simply open frames to which is attached some type of collecting bag or container. As the dredge is dragged across the sea floor, it scoops up whatever it encounters.

General lithologies are listed in Table 1. The rocks are predominantly siltstones, with a few samples of sandstone and limestone. Limestone samples

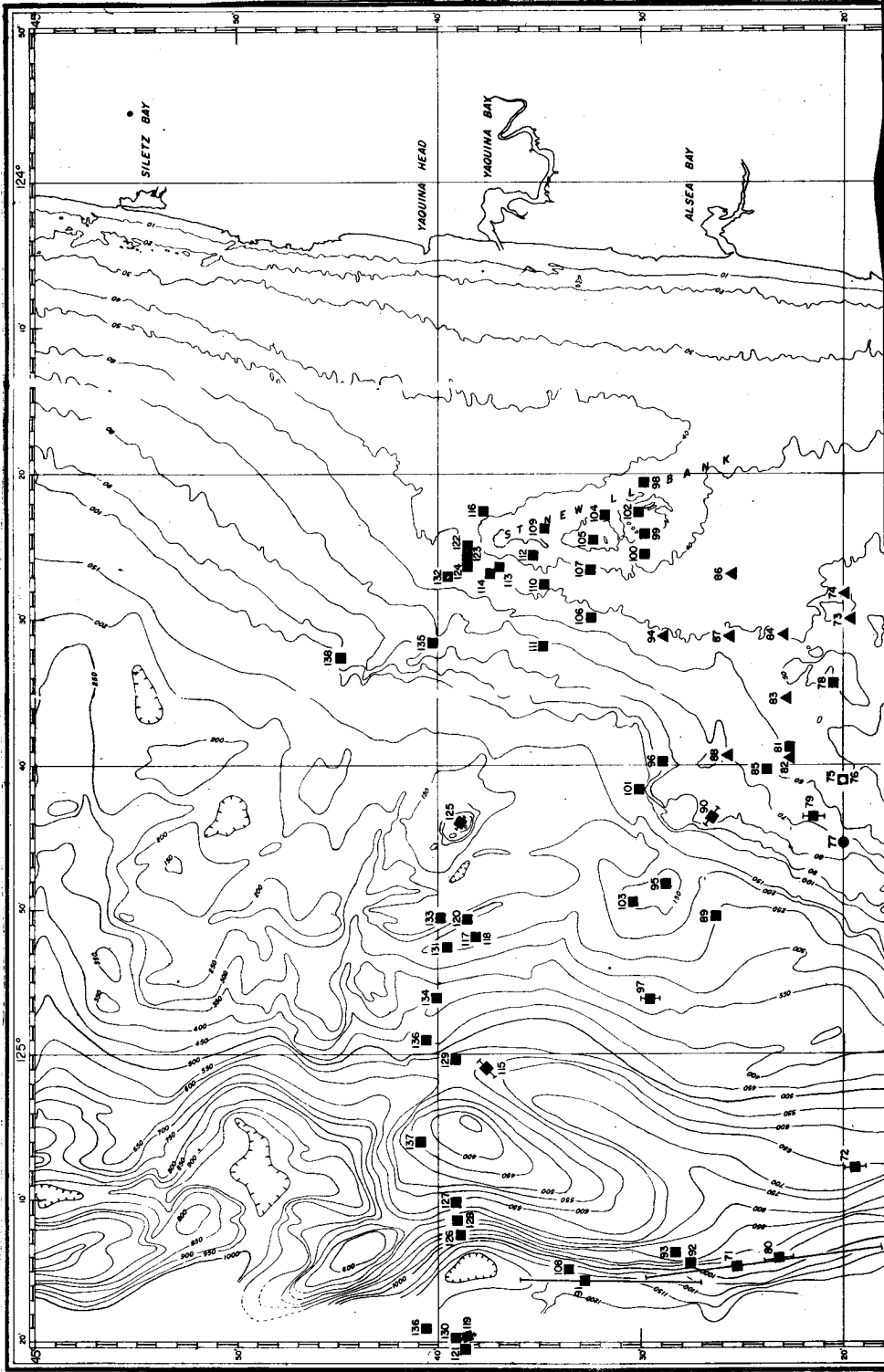
* Department of Oceanography, Oregon State University, Corvallis.

TABLE 1. Rock Samples - Oregon Continental Terrace

No.	OSU Sample No.	Latitude	Longitude	Type of Sampler ^{1/}	Rock Type
1	6308-1	43 48.1	124 53.8	P	Silty limestone
		43 50.0	124 55.0		
2	OC-0023	43 49.8	124 46.5	OT	Calcareous siltstone with vugular aragonite
3	6306-2	43 50.1	124 55.5	P	Silty limestone
4	6306-3	43 50.3	124 53.1	P	Shaley mud
5	6301-16	43 51.0	124 25.0	F	Siltstone
6	6306-4	43 52.0	124 56.0	P	Green pellet, calcareous siltstone
7	6306-10	43 54.6	124 47.1	P	Limestone
		43 55.0	124 47.6		
8	6308-15	43 55.1	124 54.2	P	Silty limestone
9	6306-8	43 55.1	124 56.0	P	Silty limestone
10	6209-23	43 55.4	124 47.7	F	Limestone
11	6306-9	43 55.4	124 42.2	P	Limestone
12	6301-2-100	43 56.0	124 25.4	G	Siltstone
13	6301-2-96	43 56.0	124 43.0	C	Stiff, gray, silty clay
14	6301-2-95	43 56.0	124 47.2	C	Clayey siltstone
15	6301-2-93	43 56.0	124 55.4	C	Limestone pebbles
16	6301-17	43 57.7	124 40.0	F	Siltstone
		43 58.4	124 41.6		
17	6308-16	43 58.5	125 08.3	P	Silty limestone
		43 59.8	125 09.0		
18	6301-2-89	43 59.0	124 42.8	G	Calcareous siltstone pebble
19	6301-2-90	43 59.0	124 46.9	C	Friable clayey siltstone
20	6209-24	43 59.0	124 47.7	F	Silty limestone
21	6301-2-91	43 59.0	124 51.0	C	Friable clayey siltstone
22	6301-2-92	43 59.0	124 56.7	C	Diatomaceous clayey siltstone
23	6209-25	43 59.3	124 53.9	F	Diatomaceous siltstone
24	6209-21	43 59.8	124 51.6	F	Siltstone
25	6306-11	44 00.0	124 56.8	P	Diatomaceous siltstone
26	6301-2-73	44 02.0	124 47.4	C	Friable clayey siltstone
27	6301-2-72	44 02.0	124 51.5	C	Friable clayey siltstone
28	6301-2-71	44 02.0	124 55.5	C	Friable clayey siltstone
29	6209-20	44 02.1	124 51.9	F	Diatomaceous siltstone, calcareous pebble
30	6209-19	44 04.0	124 51.5	F	Calcareous fine sandstone and siltstone
31	6308-18	44 04.5	125 14.4	P	Stiff clay and shale chips
		44 04.3	125 14.2		
32	6306-15	44 04.9	125 01.0	P	Pebbles
33	6301-2-69	44 05.1	124 50.5	C	Friable clayey siltstone
34	6301-2-67	44 05.2	124 42.2	C	Limestone pebbles
35	6301-2-68	44 05.5	124 46.3	C	Friable clayey siltstone
36	6209-18	44 05.5	124 54.3	F	Silty limestone cobble, diatomaceous siltstone

^{1/} Type of Sampler -- C-Corer, F-Frame Dredge, G-Grab Sampler, OT-Otter Trawl, P-Pipe Dredge, AD-Anchor Dredge.

Compiled November 1963, Department of Oceanography, Oregon State University.



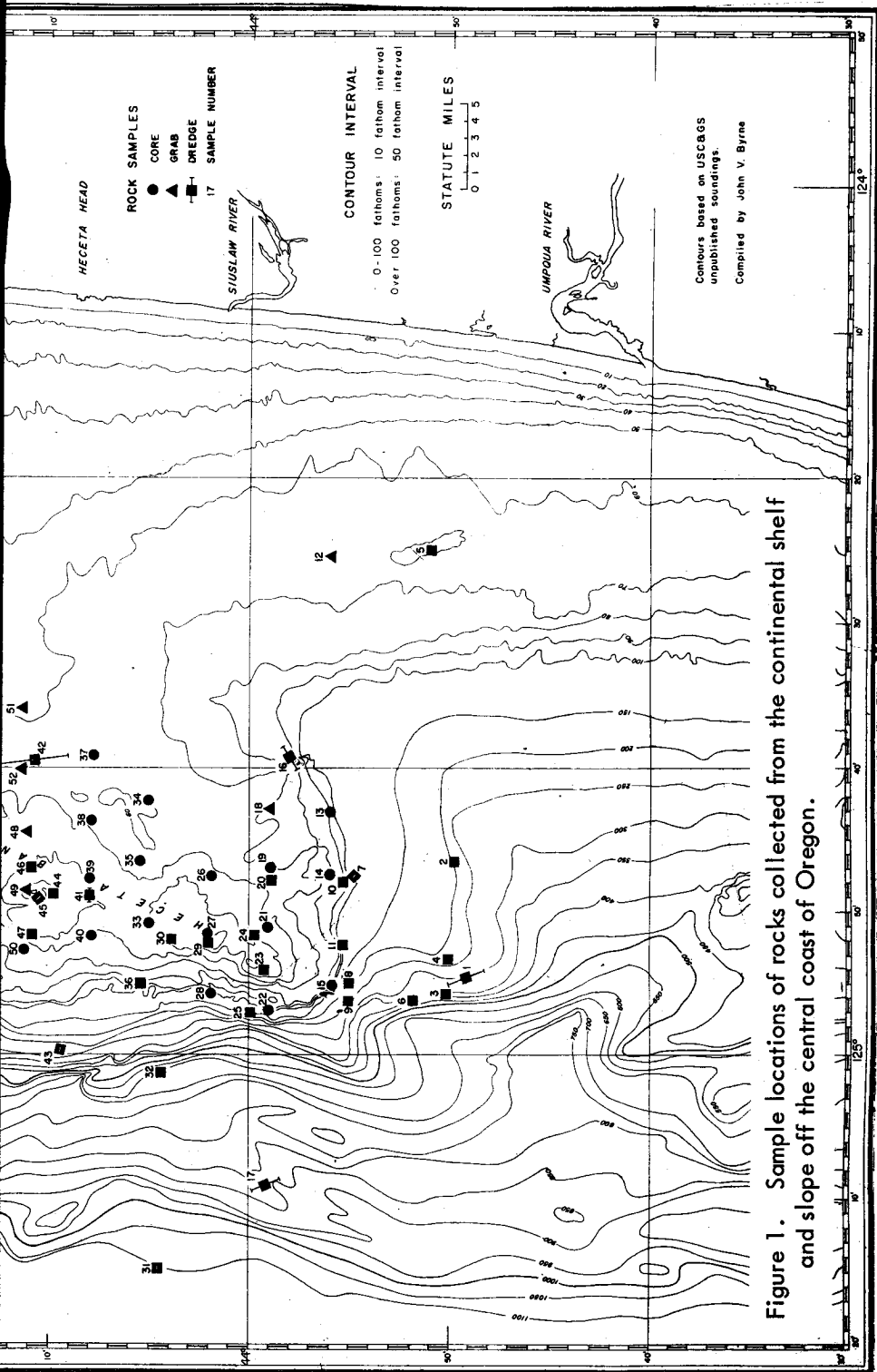


Figure 1. Sample locations of rocks collected from the continental shelf and slope off the central coast of Oregon.

TABLE 1. Rock Samples - Oregon Continental Terrace, Continued

No.	OSU Sample No.	Latitude	Longitude	Type of Sampler	Rock Type
37	6301-2-51	44 08.0	124 39.2	C	Limestone pebbles
38	6301-2-50	44 08.0	124 43.5	C	Friable clayey siltstone
39	6301-2-49	44 08.0	124 47.5	C	Friable clayey siltstone
40	6301-2-48	44 08.0	124 51.6	C	Friable clayey siltstone
41	6209-17	44 08.1	124 48.5	F	Siltstone
		44 08.1	124 48.9		
42	OC-0048	44 09.2	124 39.2	OT	Calcareous fine sandstone
		44 12.7	124 39.7		
43	6306-18	44 09.7	124 59.3	P	Clayey siltstone
		44 09.5	124 59.7		
44	6209-16	44 09.8	124 48.5	F	Clayey siltstone, calcareous siltstone
45	6209-14	44 10.5	124 48.8	F	Green pellet sandstone, calcareous siltstone, diatomaceous siltstone
		44 10.7	124 49.1		
46	6209-12	44 10.8	124 46.6	F	Siltstone, calcareous siltstone, green pellet sandstone, breccia
47	6209-13	44 10.8	124 51.4	F	Siltstone, calcareous siltstone, green pellet sandstone, breccia
48	6301-2-43	44 11.1	124 44.4	G	Clayey siltstone, limestone pebble
49	6301-2-44	44 11.1	124 48.4	G	Clayey siltstone
50	6301-2-45	44 11.1	124 52.6	C	Clayey siltstone
51	6301-2-41	44 11.3	124 35.8	G	Calcareous siltstone pebble
52	6301-2-42	44 11.3	124 40.0	G	Siltstone
53	6209-15	44 12.4	124 49.5	F	Green pellet sandstone, siltstone
		44 12.6	124 49.9		
54	6308-23	44 13.0	125 14.1	P	Stiff, gray clay
		44 13.9	125 14.1		
55	6209-11	44 14.1	124 43.5	F	Siltstone, calcareous siltstone
56	6301-2-28	44 14.2	124 35.3	G	Limestone pebble, friable siltstone
57	6301-2-27	44 14.2	124 39.5	C	Calcareous siltstone, friable sandstone
58	6301-2-26	44 14.2	124 43.6	G	Siltstone
59	6301-2-25	44 14.2	124 47.7	C	Friable clayey siltstone
60	6301-2-24	44 14.2	124 52.0	C	Friable silty clay
61	6301-2-23	44 14.2	124 56.2	G	Limestone pebble
62	6301-15	44 14.8	124 52.5	F	Sandstone
		44 15.1	124 51.2		
63	6301-14	44 14.9	124 55.0	F	Silty limestone
		44 15.0	124 54.3		
64	6301-2-17	44 17.0	124 35.5	G	Limestone pebbles
65	6301-2-18	44 17.0	124 37.9	G	Siltstone
66	6301-2-19	44 17.0	124 42.0	G	Siltstone
67	6301-2-21	44 17.0	124 50.3	G	Siltstone, gravel
68	6209-7	44 17.2	124 35.5	F	Siltstone, calcareous siltstone
69	6209-8	44 17.2	124 39.8	F	Green pellet sandstone, diatomaceous siltstone
70	6209-9	44 17.3	124 43.4	F	Diatomaceous siltstone, silty limestone boulder
71	OC-0018	44 18.1	125 13.2	OT	Mudstone, diatomite
		44 29.7	125 15.4		
72	6308-28	44 19.0	125 07.7	P	Pebbles, shale chips
		44 20.0	125 07.7		

TABLE 1. Rock Samples - Oregon Continental Terrace, Continued

No.	OSU Sample No.	Latitude	Longitude	Type of Sampler	Rock Type
73	6301-2-4	44 19.7	124 30.0	G	Gravel
74	6301-2-5	44 19.9	124 28.3	G	Limestone pebbles
75	6301-2-3	44 20.0	124 41.0	C	Friable fine sandstone
76	6209-10	44 20.0	124 41.0	F	Siltstone
77	6301-2-2	44 20.0	124 45.2	C	Clayey siltstone
78	6212-18	44 20.6	124 34.4	F	Clayey siltstone
79	OC-0022	44 21.9	124 43.6	OT	Clayey siltstone
		44 21.0	124 43.6		
80	OC-0002	44 22.5	125 13.8	OT	Silty limestone
		44.24.0	125 14.2		
81	OC-0015	44 22.7	124 38.8	OT	Silty mudstone
82	OC-0027	44 22.7	124 39.3	G	Diatomaceous siltstone
83	OC-0032	44 22.8	124 35.4	G	Siltstone, limestone, pebbles
84	OC-0024	44 23.0	124 31.0	G	Silty limestone, diatomaceous siltstone
85	OC-0012	44 23.9	124 40.1	OT	Diatomaceous siltstone
86	OC-0028	44 25.6	124 26.8	G	Siltstone
87	OC-0026	44 25.6	124 31.2	G	Siltstone
88	OC-0033	44 25.8	124 39.3	G	Siltstone
89	6209-4	44 26.3	124 50.6	F	Siltstone
90	6209-5	44 26.3	124 42.8	F	Calcareous siltstone
		44 26.7	124 44.1		
91	OC-0017	44 27.0	125 15.6	OT	Mudstone, clinker
		44 35.8	125 15.6		
92	OC-0005	44 27.6	125 14.2	OT	Wood, clinker, clayey siltstone
93	OC-0014	44 28.3	125 13.4	OT	Clinker
94	OC-0027	44 28.8	124 31.2	G	Calcareous siltstone
95	OC-0043	44 28.8	124 48.1		Siltstone
96	6212-17	44 28.9	124 39.5	F	Calcareous siltstone
97	6301-4	44 29.5	124 56.0	F	Siltstone
		44 30.0	124 56.0		
98	6212-8	44 30.0	124 20.5	F	Silty limestone, siltstone
99	6212-9	44 30.0	124 24.0	F	Diatomaceous siltstone
100	6212-10	44 30.0	124 25.5	F	Siltstone, calcareous siltstone with green pellets
101	6301-1	44 30.0	124 41.6	F	Silty limestone, calcareous siltstone
102	OC-0021	44 30.2	124 22.6	OT	Siltstone, calcareous siltstone
103	6301-2	44 30.2	124 49.3	F	Silty limestone, calcareous siltstone
		44 30.6	124 49.4		
104	OC-0016	44 31.7	124 22.8		Clayey siltstone with diatoms
105	6212-6	44 32.4	124 24.5	F	Calcareous siltstone
106	6212-16	44 32.4	124 30.0	F	Calcareous siltstone, siltstone
107	6212-7	44 32.5	124 26.4	F	Siltstone, calcareous siltstone
108	OC-0036	44 33.5	125 14.5	AD	Friable fine sandstone
109	6212-2	44 34.7	124 23.7	F	Siltstone
110	OC-0025	44 34.7	124 27.5	G	Diatomaceous siltstone
111	6212-15	44 34.8	124 31.5	F	Siltstone
112	6212-4	44 35.3	124 27.2	F	Calcareous siltstone
113	OC-0001	44 37.2	124 26.4	F	Diatomaceous siltstone
114	OC-0035	44 37.5	124 26.7	G	Calcareous siltstone, siltstone pebbles
115	OC-0047	44 37.0	125 01.5	AD	Coal, clinker
		44 37.8	125 00.6		

TABLE 1. Rock Samples - Oregon Continental Terrace, Continued

No.	OSU Sample No.	Latitude	Longitude	Type of Sampler	Rock Type
116	OC-0031	44 37.7	124 22.5	G	Siltstone
117	OC-0004	44 38.1	124 51.8	OT	Siltstone
118	OC-0042	44 38.1	124 51.8	AD	Clayey siltstone
119	OC-0040	44 38.3	125 19.3	AD	Silty mudstone
		44 38.8	125 19.5		
120	OC-0046	44 38.5	124 50.7	AD	Calcareous siltstone
121	OC-0045	44 38.6	124 20.1	AD	Friable sandstone
122	OC-0019	44 38.6	124 25.6		Diatomaceous siltstone, calcareous siltstone
123	OC-0009	44 38.6	124 25.7		Diatomaceous siltstone
124	OC-0010	44 38.6	124 26.2	F	Clayey siltstone with diatoms
125	OC-0007	44 38.8	124 43.5	F	Silty limestone
		44 39.0	124 44.0		
126	OC-0039	44 38.8	125 12.1	AD	Sandstone, siltstone
127	OC-0037	44 39.0	125 10.0	AD	Calcareous siltstone, clayey siltstone
128	OC-0041	44 39.0	125 11.0	AD	Clayey siltstone
129	OC-0008	44 39.1	125 00.5		Limestone
130	OC-0038	44 39.1	125 19.5	AD	Sandstone, clayey silt
131	OC-0006	44 39.6	124 52.6		Calcareous siltstone
132	OC-0020	44 39.7	124 27.0	F	Siltstone
133	OC-0003	44 39.9	124 50.3	F	Calcareous siltstone, silty limestone
134	OC-0013	44 40.0	124 56.0	F	Clinker
135	OC-0034	44 40.5	124 31.5	G	Diatomaceous siltstone
136	OC-0011	44 40.6	124 58.9	F	Coal
137	6305-3	44 41.0	125 06.0	P	Friable mudstone
138	OC-0044	44 44.8	124 32.3	F	Silty limestone

may represent calcareous concretions which have "weathered" from the less resistant siltstone or shale. The stiff gray clay (sample 54) may be shale in a stage of formation, or possibly is a submarine "weathering" product of a shale or mudstone. Several samples are believed to have been dropped from ships, and are thought not to have been in place at the time of collection, for example, the clinkers and coal of samples 93, 115, 134, 136.

In view of the current interest in the petroleum possibilities of the area off the coast of Oregon, these rock samples have been made available for examination at the Department of Oceanography on the campus of Oregon State University in Corvallis. Arrangements for such an examination may be made by contacting Dr. John V. Byrne at the Department of Oceanography.

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