GRAB OPERATIONS AND PROCESSING LOG

SHIP: RV ESTERO

CRUISE: ESTERO (00030)

AREA: JOHN DAY RESERVOIR - COLUMBIA RIVER

DATES: 12 - 28 SEPT., 2000

PROJECT: SW WASHINGTON COASTAL EROSION

CHIEF SCIENTIST: DAVE TWICHELL

STATION LOG Start date 9/25/00 (JD = 269)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 1 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL:_____

STA. NO.	JD	TIME (~~UTC~~ PDT) Daylight Time			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
1	269	2:00 ✓ 3:06 PDT	6:41 3:10.41			

Depth, m	Depth, m	Depth, m

VIDEO LOCATION:
Start Lat. N_____ Long. W _____
End Lat. N_____ Long. W _____

SAMPLE LOCATION:
Lat. N _____ Long. W _____

SAMPLES TAKEN:
Texture: ✓ small mud sample Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: _____

DESCRIPTION OF BOTTOM: cobbles to boulders, covered w/ mud blanket; seldom shells (corbicula)

STILL PHOTOS: Roll No. 1 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
1	5:50 3:09				104'

STATION LOG Start date _____ (JD = _____)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 1 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
2		1016:37 UTC 0707	no sample	1019.44	0707	1008

Depth, m	Depth, m	Depth, m
92 ft		

VIDEO LOCATION:
Start Lat. N _____ Long. W _____
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
Lat. N 45° 43.35 Long. W 120° 12.84' W

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: _____

DESCRIPTION OF BOTTOM: cobble to boulders with mud cover

STILL PHOTOS: Roll No. 1 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)

STATION LOG Start date 9/26/00 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
3	270	0000 0320.37Z ~~0319Z~~	0324.30	0358 0324.35		

Depth, m	Depth, m	Depth, m
	90 ft.	

VIDEO LOCATION:
0318Z Start Lat. N _____ Long. W _____
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
Lat. N _____ Long. W _____

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: _____

DESCRIPTION OF BOTTOM: cobbles (rounded) with discontinuous silt veneer. Tried to get sample in

STILL PHOTOS: Roll No. 2 Film Type ASA 400

First 2 photos on Deck

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
3	142 0322.19				
4	222 0322.42				
5	232 0323.02				

STATION LOG Start date _____ (JD = _____)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. _____ STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm _____ Hi-8 mm_____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
4	270	0334.13Z ~~0359~~	0335.57	~~0557~~ 0336.21Z	~~0335~~ 0359	0557

Depth, m	Depth, m	Depth, m
	92 ft	

VIDEO LOCATION:
Start Lat. N_____ Long. W _____
End Lat. N_____ Long. W _____

SAMPLE LOCATION:
Lat. N _____ Long. W _____

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: One cobble & some mud
cobble dimension 7 x 9 x .75 inches

DESCRIPTION OF BOTTOM: Sidescan shows dunes + video shows rounded cobbles with silt cover.

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
6	0501 0335.09Z				
7	0519 0335.33Z				

STATION LOG Start date _____ (JD = _____)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. _____ STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
5	270	in water 0347.49	0349.29	0351.01	0558	0749

Depth, m	Depth, m	Depth, m
	76 ft	

VIDEO LOCATION: 0348.29 on bottom
Start Lat. N 45°43.34 Long. W 120°14.97
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
Lat. N _____ Long. W _____

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Mud with one well rounded cobble cobble 3" x 4" x 3/4" + 2 mussel shells - Took deck photo

DESCRIPTION OF BOTTOM: Few cobbles, but a thicker sediment cover than the previous site

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
8	0349.03Z 0716 Video				

2 bags of mud, 1 bag of cobble + 1 bag for 2 shells.

STATION LOG Start date 26 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ✓ Hi-8 mm ____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
6	270	0406.53 ~~0756~~	0410.03	0410.06	0756	1113

Depth, m	Depth, m	Depth, m
	89 ft	

VIDEO LOCATION:
Start Lat. N 45°43.49 Long. W 120°14.94
End Lat. N 45°43.48 Long. W 120.14.90

SAMPLE LOCATION:
Lat. N 45°43.48 Long. W 120° 14.90

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Full bucket of mud - soupy silty-clay with a small amount of fine sand. 1-2 bags of mud collected

DESCRIPTION OF BOTTOM: Uniform muddy bottom

STILL PHOTOS: Roll No. 2 Film Type ____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
9	0407.43	1046 Vid			89 ft

2 bags of mud.

STATION LOG Start date 26 Sept 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ✓ Hi-8 mm ____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
7	270	0432.19	0434.23	0434.23	1116	1326
2nd try		~~1337~~ 043907	0439.31		1337	1412

Depth, m	Depth, m	Depth, m
	68ft	

VIDEO LOCATION:
Start Lat. N 45° 43.04 Long. W 120° 15.65W
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
434.23 Lat. N 45° 43.03 Long. W 120° 15.61
SAMPLES TAKEN: 0439.31 – 45° 43.03 120° 15.59
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Full bucket of sandy mud – sample is greener at surface + darker at base of bucket, but all the same texture.

DESCRIPTION OF BOTTOM: Muddy bottom with clam tracks + lots of depressions

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
10	043407	1253 Vid			

1st sample didn't trip.
2nd sample – full of mud
2 bags of mud

STATION LOG Start date 26 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ✓ Hi-8 mm____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL:_____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
8	270	0451.43	0453.51 1627	1639	1430	1639

Depth, m	Depth, m	Depth, m
	80ft	

VIDEO LOCATION:
Start Lat. N 45° 43.22 Long. W 120° 15.80'
End Lat. N_____ Long. W_____

SAMPLE LOCATION:
Lat. N 45° 43.22 Long. W 120° 15.78

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: 1 rounded cobble.

DESCRIPTION OF BOTTOM: Well rounded cobbles with a thin discontinuous mud cover.
cobble - 3½ x 4 x 1½, one shell, small amount of sample that is sandier.

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
11	0452.55	1522			
12	045329	1538			

1 cobble, 1 bag shells, 1 small bag of sediment
Digital camera photo 23.

STATION LOG Start date _____ (JD = _____)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. _____ STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
9	270	0506.01	~~1445 Vid~~ 1958 Vid	0509.19	1640	2025

Depth, m	Depth, m	Depth, m
	76 ft	

VIDEO LOCATION:
Start Lat. N 45° 43.23 Long. W 120° 15.99'W
End Lat. N _____ Long. W _____

0509.19 ~~0508.50~~ SAMPLE LOCATION:
Lat. N 45° 43.21 Long. W 120° 15.94

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: _____

DESCRIPTION OF BOTTOM: cobbles with some boulders with thin mud cover.

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
13	0507.19	1755 Vid			
14	0507.27	1806 video			

coroplinum on the one cobble collected
cobble - 5½ x 4½ x 2" - no other sample

STATION LOG Start date 26 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ✓ Hi-8 mm____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL:_____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
10		0524.59 ~~2025~~	0527.17	2245 video	2025	~~2245~~ 2304

Depth, m	Depth, m	Depth, m
	90 ft	

VIDEO LOCATION:
Start Lat. N 45°43.28 Long. W 120° 16.06'W
End Lat. N_____ Long. W_____

SAMPLE LOCATION:
0527.17 Lat. N 45°43.28 Long. W 120° 16.01

SAMPLES TAKEN:
Texture: ✓ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Silty - clay (soupy) with small amount of sand.

DESCRIPTION OF BOTTOM: Muddy bottom with lots of clam tracks + small hummocks.

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
15	0526.26	2148			90 ft
16	0526.39	2203			90 ft

2 bags of sample taken.

STATION LOG Start date 26 Sept 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ✓ Hi-8 mm____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL:_____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
11	270	0537.43	2531 0540.09	0540.35	2304	2551

Depth, m	Depth, m	Depth, m
	94 ft	

VIDEO LOCATION:
Start Lat. N 45° 43.34 Long. W 120° 15.89
End Lat. N_____ Long. W_____

SAMPLE LOCATION:
Lat. N 45° 43.32 Long. W 120° 15.84

SAMPLES TAKEN:
Texture: ✓ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Silt

DESCRIPTION OF BOTTOM: Thick mud blanket with twigs - detritus from fish

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
17	0539.01	2418			

2 Sample bags. - Sampler full

STATION LOG

Start date 26 ~~July~~ Sept, 00 (JD = 270)

CRUISE: ESTERO (00030)

SHIP: RV ESTERO

VIDEO TAPE NO. 2 (8 mm ✓ Hi-8 mm____)

STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
12	270	0549.47		0551.59	2551	2801

Depth, m	Depth, m	Depth, m
	86 ft	

VIDEO LOCATION:

Start Lat. N_____ Long. W _____

End Lat. N_____ Long. W _____

SAMPLE LOCATION:

Lat. N _____ Long. W _____

SAMPLES TAKEN:

Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: _____

DESCRIPTION OF BOTTOM: Boulders - angular - with thin sed blanket - Not nearly as rounded as the cobbles - up to .5-1 m in diameter.

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
18	0551.07	2717			
19		2737			

STATION LOG Start date 26 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ✓ Hi-8 mm____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL:_____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
13	270	0709.27	3009 0711.39	0712.03	2801	3034

Depth, m	Depth, m	Depth, m
	104 ft	

VIDEO LOCATION:
Start Lat. N 45° 41.48 Long. W 120° 26.64'W
End Lat. N_____ Long. W_____

SAMPLE LOCATION:
0711.39 Lat. N 45° 41.46 Long. W 120° 28.59

SAMPLES TAKEN:
Texture: ✓ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: ~~no sample recovered - too soft to trip~~
Soupy mud - full bucket.

DESCRIPTION OF BOTTOM: muddy bottom & poor visability

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
~~20~~	no photos this towing.				

2 Sample bags.

STATION LOG Start date 26 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ✗ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
14	270	0722.35	3323 0725.29.	072553	3034	3342

Depth, m	Depth, m	Depth, m
	75ft	

VIDEO LOCATION:
Start Lat. N 45° 41.79 Long. W 120° 28.50'
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
0725.29 Lat. N 45° 41.78 Long. W 120. 28.45

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: no sample

DESCRIPTION OF BOTTOM: Sample from upstream end of a bar. Cobbles + some boulders up to ~ 50 cm diameter with thicker mud cover - in a lot of places cobbles completely covered.

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
20	072341	3136			
21	0723.58	3148			
22	0724.35	3227			

STATION LOG Start date _____ (JD = _____)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC) Video on bottom	Sample taken	Video off bottom	TAPE COUNTER Start	Stop
15	270	0734.33	3559 0736.45	0737.07	3342	3612

Depth, m	Depth, m	Depth, m
	78 ft	

VIDEO LOCATION:
Start Lat. N 45° 41.93 Long. W 120° 28.72 W
End Lat. N ~~45° 41.91~~ Long. W ~~120° 28.68~~

SAMPLE LOCATION:
0736.45 Lat. N 45° 41.91 Long. W 120° 28.68

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: 1/2 bucket - much sandier - 30-50% med sand.

DESCRIPTION OF BOTTOM: Mud covered cobbles in high backscatter area - no tracks - Fairly contiguous mud cover - high backscatter on sidescan - Sample was much sandier than others we have collected.

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
23	0735.35	3440			

2 bags of sample

STATION LOG Start date _____ (JD = _____)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 (8 mm ____ Hi-8 mm ✓) STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
16	270	0745.45	38.25 0747.51	0748.25	3612	3845

Depth, m	Depth, m	Depth, m
	86 ft	

VIDEO LOCATION:
Start Lat. N 45° 41.92 Long. W 120° 29.05' W
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
Lat. N 45° 41.89 Long. W 120° 29.01

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Mud with small sand content & 2 gravel clasts

DESCRIPTION OF BOTTOM: Muddy bottom - very few cobbles

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
24	0747.25	3745			

2 typ mud + 1 typ of 2 gravel grains

STATION LOG Start date 26 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 (8 mm ____ Hi-8 mm ✓) STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
17		0757.05	4101 0759.11	0759.35	3845	4113

Depth, m	Depth, m	Depth, m
	80	

VIDEO LOCATION:
Start Lat. N 45°41.85' N Long. W 120°29.24' W
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45° 41.82 Long. W 120 29.22

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Sandy mud with some 2 cm gravel clasts.

DESCRIPTION OF BOTTOM: Buried cobbles with some patches that are swept nearly clean.

STILL PHOTOS: Roll No. 2 Film Type ____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
25	0757.49	3937			
26	758.21	4008			

2 bags of mud, 1 bag of rocks.

STATION LOG Start date 27 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
18	270	0815.05	0817.09	0817.33	4113	4331

Depth, m	Depth, m	Depth, m
	101 ft	

VIDEO LOCATION:
Start Lat. N 45° 41.60 Long. W 120° 29.39' W
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
Lat. N 45° 41.58 Long. W 120. 29.38

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Muddy sample with no sand.

DESCRIPTION OF BOTTOM: Thick mud cover - can't descern cobbles - lots of tracks

STILL PHOTOS: Roll No. 2 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
27	0816.13	4226			
28	0816.21	4227			

2 bags of mud

STATION LOG Start date 26 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
1A	270	0825.33	0828.11	0828.49	4331	4647

Depth, m	Depth, m	Depth, m
	81 ft	

VIDEO LOCATION:
Start Lat. N 45°41.78'N Long. W 120° 29.43'W
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45° 41.73 Long. W 120°29.41

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: ~~45° 41.73~~
cobble 7x5x4" & small bag of mud.

DESCRIPTION OF BOTTOM: Mud cover with cobbles showing in places.

STILL PHOTOS: Roll No. 2 Film Type ____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
29	0826.51	4449			
30	0827.05	4459			

1 small bag of mud

STATION LOG Start date 26 Sept 2000 (JD = 270)

CRUISE: ESTERO (00030) **SHIP:** RV ESTERO

VIDEO TAPE NO. 2 **STUDY AREA:** John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
20	270	0933.39	4942 0936.27	936.57	4647	5006

Depth, m	Depth, m	Depth, m
	101	

VIDEO LOCATION:
Start Lat. N _____ Long. W _____
End Lat. N 45 44.76 Long. W 120° 37.84

SAMPLE LOCATION:
Lat. N 45° 44.76 Long. W 120° 37.82

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: 6 ~~good~~ cobbles + small amount of sandy mud with some shells.

DESCRIPTION OF BOTTOM: Lots of cobbles - some parts of the transect there was almost no sediment veneer + in other places the cobbles were fairly well covered.

STILL PHOTOS: Roll No. 3 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
01	0934.11	4721			
02	0934.21	4732			
03	0934.37	4753			
04	093521	4831			

1. 2.5 x 4 x 1.75"
2. 2.75 x 3.25 x 1.5"
3. 3.5 x 3.75 x 1"
4. 1.75 x 2 x 1.75"
5. 1.75 x 2.5 x 1.5"
6. 4.25 x 5 x 1.25

6 - well rounded clasts mostly basalt + 1 granite

Small bag of sandy mud
bag of shells.

STATION LOG

Start date 26 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030)

SHIP: RV ESTERO

VIDEO TAPE NO. 2 (8 mm ____ Hi-8 mm ✓)

STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
21	270	0955.47	0959.37	0959.57	5006	5450

Depth, m	Depth, m	Depth, m
	130 ft	

VIDEO LOCATION:
Start Lat. N 45° 44.94' N Long. W 120° 37.62' W
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45° 44.88 Long. W 120° 37.58

SAMPLES TAKEN:
Texture: ___ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Sandy mud with gravel - Sandier than previous sample.

DESCRIPTION OF BOTTOM: Started in low backscatter muddy bottom & drifted onto higher backscatter cobbles.

STILL PHOTOS: Roll No. 3 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
05	0958.09	5227			
06	0958.19	5237			

2 sample bags - gravel in sample

STATION LOG Start date 26 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: UTC (PM)

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
22	270	1009.23	1012.13	1012.43	5415	5723

Depth, m	Depth, m	Depth, m
	96ft	

VIDEO LOCATION:
Start Lat. N 45°44.86 Long. W 120° 37.43
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45°44.80 Long. W 120° 37.44

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Small amount of mud in the get

DESCRIPTION OF BOTTOM: Cobbles with almost complete sediment cover.

STILL PHOTOS: Roll No. 3 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
07	1010.41	5528			
08	1011.19	5609			
09	1011.49	5639			

One small bag of mud.

STATION LOG Start date 26 Sept 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 (8 mm ____ Hi-8 mm ✓) STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
23	270	1021.23	1024.55	1038.05	5723	10151
2nd Coring.		1035.01	10:37.21		10151	104.41

Depth, m	Depth, m	Depth, m
	140 ft	

VIDEO LOCATION:
Start Lat. N 45°44.66 N Long. W 120°37.50' W
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
Lat. N 45°44.63 Long. W 120° 37.50 2nd try

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Mud with no sand

DESCRIPTION OF BOTTOM: Muddy bottom - no evidence of cobbles. Lots of pits in the bottom

STILL PHOTOS: Roll No. 3 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
10	1023.19	5915			
11	1023.59	5957			
12	1026				

2 tape.

STATION LOG Start date 26 Sept, 2000 (JD = 270)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 2 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
24	270	1053.51	1058.55	1059.27	104.41	11000

Depth, m	Depth, m	Depth, m
	95ft	

VIDEO LOCATION:
Start Lat. N 45°44.93 Long. W 120° 36.91
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45°44.88 Long. W 120°36.89

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: more chironomids here than anywhere else today - some live corbicula.

DESCRIPTION OF BOTTOM: Mostly mud with some patches of exposed boulders - in a area on sidescan that looks like dunes!

STILL PHOTOS: Roll No. 3 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
13	1054.57	10545			
14	1085.15	10603			
15	1055.49	10636			
16	1057.03	107.51			

1107:02 GPS nav off

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. #3 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC) Video on bottom	Sample taken	Video off bottom	TAPE COUNTER Start	Stop
25	271	0325.46	0151 0327.30	~0328.20	0000	0206

Depth, m	Depth, m	Depth, m
	74	

VIDEO LOCATION:
Start Lat. N 45°46.72 Long. W 120° 5.26' W
End Lat. N 45° 46.70 Long. W 120° 5.25' W

SAMPLE LOCATION:
Lat. N 45°46.78 Long. W 120°5.24

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Mud with a very small amount of very fine sand.

DESCRIPTION OF BOTTOM: Muddy bottom with no cobbles present. Some bioturbation, but didn't seem as extreme as some that we saw yesterday.

STILL PHOTOS: Roll No. 4 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
1	326.54	1.15			
2	327.12	1.30			

1 bag of mud taken

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 (8 mm ____ Hi-8 mm ✓) STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
26	271	0342.08	0409 0344.06	0344.30	0206	0425

Depth, m	Depth, m	Depth, m
	65ft	

VIDEO LOCATION:
Start Lat. N 45° 46.88 Long. W 120 4.42
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45°46.87 Long. W 120° 4.43

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Muddy sediment with 2 cobbles caught in the jaws

DESCRIPTION OF BOTTOM: Muddy bottom at first then come over mud covered cobbles.

STILL PHOTOS: Roll No. 4 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
3	343.16	0315			
4	343.26	0326			
5	034346	0347			

cobbles 3×4×1.25" granite
3.5×4.5×1.5" basalt
3×4×1.5 granite
1 Sample bag

STATION LOG

Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030)

SHIP: RV ESTERO

VIDEO TAPE NO. 3 (8 mm ____ Hi-8 mm ✓)

STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
27		0354.36	0702 0357.14	0357.38	0425	0716

Depth, m	Depth, m	Depth, m
	40ft	

VIDEO LOCATION:
Start Lat. N 45°46.99 Long. W 120°4.45' W
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45°46.99 Long. W 120°4.41

SAMPLES TAKEN:
Texture: ___ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: no sample - only 1 cobble in the jaws.

DESCRIPTION OF BOTTOM: Crest of bar - good visibility - cobbles with a very thin mud blanket

STILL PHOTOS: Roll No. 4 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
6	0355.30	0513			
7	0355.36	0518			
8	0355.46	0531			
9	0355.56	0542			
10	0356.34	0621			
11	035648	0634			

1 cobble 3" x 4" x 2"

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm____)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
28		0415.22	0932 0417.32	0417.52	0716	0942

Depth, m	Depth, m	Depth, m
	70ft	

VIDEO LOCATION:
Start Lat. N 45°47.12 Long. W 120° 4.52'W
End Lat. N 45°47.09 Long. W 120° 4.50'W

SAMPLE LOCATION:
Lat. N 45° 47.10 Long. W 120° 452

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Very small amount of mud.

DESCRIPTION OF BOTTOM: Cobbles showing but more sediment cover - some gravel patches also. ~~Fr~~ Site on Northern flank of a bar.

STILL PHOTOS: Roll No. 4 Film Type ASA-400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
12	0416.06	0809			
13	0416.20	0824			
14	0416.46	0846			

5 x 6.5.2.5" - granite cobble

1 bag with small amt of mud.

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) **SHIP:** RV ESTERO

VIDEO TAPE NO. 3 **STUDY AREA:** John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC) Video on bottom	Sample taken	Video off bottom	TAPE COUNTER Start	Stop
29	271	0426.48	1116 0428.18	0428.38	0942	1126
2nd LOWERING		0431.20	0431.46	0432.12	1126	1212

Depth, m	Depth, m	Depth, m
	72ft	

VIDEO LOCATION:
Start Lat. N 45°47.30 N Long. W 120° 4.67'W
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45°47.28 Long. W 120°4.65
45°47.24 120°4.67'W

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Mud with very small amount of ~~tan~~ sand — more worm tubes than we have seen elsewhere.

DESCRIPTION OF BOTTOM: Mud covered bottom - pits may be collapse features around boulders, but don't see cobbles or boulders.

STILL PHOTOS: Roll No. 4 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
15	0427.30	1024			
16	0427.40	1032			
17	0427.54	1047			

1st lowering didn't trip

1 sample bag taken

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
30	271	0441.14	1426 0443.26	0443.46	1212	1435

Depth, m	Depth, m	Depth, m
	56 ft	

VIDEO LOCATION:
Start Lat. N 45° 47.20 Long. W 120° 4.97'W
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
Lat. N 45°47.19 Long. W 120° 4.93'

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Mud with a very small amount of fine sand.

DESCRIPTION OF BOTTOM: Boulders + cobbles with discontinuous mud cover. Sample taken from mud covered area

STILL PHOTOS: Roll No. 4 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
18	0442.30	1328			
19	0442.44	1341			
20	0443.00	1359			

1 bag of sample

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: UTC (PM)

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
31	271	0516.50	1618 0518.26	0518.44	1435	16:28

Depth, m	Depth, m	Depth, m
	33 ft	

VIDEO LOCATION:
Start Lat. N 45°48.12 Long. W 120° 2.39'W
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45°48.11 Long. W 120° 235

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Muddy fine sand

DESCRIPTION OF BOTTOM: Muddy bottom with no evidence of cobbles or gravel

STILL PHOTOS: Roll No. 4 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
21	05 17.44	1536 video			
22	518.02	1555			
23	518.16	1610			

1 bag of sample.

STATION LOG Start date _____ (JD = _____)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 (8 mm ____ Hi-8 mm ✓) STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
32	271	0524.58		0527.10	1628	1831

Depth, m	Depth, m	Depth, m
	39 ft	

VIDEO LOCATION:
Start Lat. N _____ Long. W _____
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
Lat. N _____ Long. W _____

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: No samples - all boulders - looked like rip rap.

DESCRIPTION OF BOTTOM: Big boulders + more angular than other places. This was the former shore, so may have been an area of rip rap - or a area of ledges.

STILL PHOTOS: Roll No. 4 Film Type _____

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
24	0525.36	1724			
25	0526.40	1806			

No Sample

STATION LOG Start date 27 Sept 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 (8 mm ____ Hi-8 mm ✓) STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
33	271	0547.24	0549.00	0549.24	1831	2021

Depth, m	Depth, m	Depth, m
	8 ft	

VIDEO LOCATION:
Start Lat. N ____ Long. W ____
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45° 47.60' Long. W 120° 2.29

SAMPLES TAKEN:
Texture: ___ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Silty - mud - no sand - lots of small wood fragments in the sample.

DESCRIPTION OF BOTTOM: Muddy bottom with no evidence of boulders or cobbles. Some bioturbation

STILL PHOTOS: Roll No. 4 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
26	0548.14	1925 Video			
27	0548.40	1948			

1 sample bag filled

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) **SHIP:** RV ESTERO

VIDEO TAPE NO. 3 (8 mm ____ Hi-8 mm ✓) **STUDY AREA:** John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: UTC (PM)

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
34	271	0558.22	2301 0600.56	0601.22	2021	2307 ~~2021~~

Depth, m	Depth, m	Depth, m
	78 ftH	

VIDEO LOCATION:
Start Lat. N ____ Long. W ____
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45°47.72 Long. W 120° 02.27

SAMPLES TAKEN:
Texture: ___ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Sandy mud with gravel to cobble clasts.

DESCRIPTION OF BOTTOM: Paler channel floor - cobbles + gravel patches with discontinuous thin mud blanket.

STILL PHOTOS: Roll No. 4 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
28	0559.42	2144			
29	0559.56	2154			
30	0600.28	2223			
31	0600.42	2243			

1 bag of cobbles
Sample
1. 2.5 x 4 x .75" basalt
2. 1.5 x 3 x 1.25" basalt
3. small gravel as well

STATION LOG Start date 27 Sept 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
35	271	0631.23	0633.00	0633.32	2307	2451

Depth, m	Depth, m	Depth, m
	69ft	

VIDEO LOCATION:
Start Lat. N 45°48.82N Long. W 119°58.91'W
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
Lat. N 45°48-83 Long. W 119°58-90

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Mud with a small amount of sand.

DESCRIPTION OF BOTTOM: Station in former river channel - Cobbles with some mud - one stick - Some places are well mud covered while other places show mud covered cobbles + gravel.

New roll of film.
STILL PHOTOS: Roll No. 5 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
1	0632.10	2343			
2	0632.32	2406			
3	0632.50	2425			

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
36	271	0642.00	0643.46	0644.10	2451	2650

Depth, m	Depth, m	Depth, m
	38 ft	

VIDEO LOCATION:
Start Lat. N 45°49.07 Long. W ~~12~~ 119°58.97
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45°49.07 Long. W 119° 58.94

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Medium - coarse sand with coarse gravel clasts

DESCRIPTION OF BOTTOM: Discontinuous mud cover over field of well rounded gravel - mud distribution was almost like bedforms covering a gravel bed.

STILL PHOTOS: Roll No. 5 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
4	642.22	2510			
5	642.34	2522			
6	0642.52	2539			
7	0643.04	2553			
8	0643.34	2625			

1 small sample bag.

STATION LOG Start date 27 Sept 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 (8 mm ____ Hi-8 mm ✓) STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
37	271	0651.58		0655.10	2650	2955

Depth, m	Depth, m	Depth, m
	67ft.	

VIDEO LOCATION:
Start Lat. N 45° 49.22 Long. W 119° 59.02
End Lat. N 45° 49.24 Long. W 119° 58.97

SAMPLE LOCATION:
Lat. N _____ Long. W _____

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: No sample - too coarse.

DESCRIPTION OF BOTTOM: Cobbles with a mud cover - also some gravel patches between boulders + cobbles - some flat cobbles standing on end.

STILL PHOTOS: Roll No. 5 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
9	0652.44	2734			
10	0653.00	2749			
11	0653.30	2814			
12	0654.02	2851			

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 (8 mm ____ Hi-8 mm ✓) STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
38	271	0706.42	070908	0709.32	2955	3236

Depth, m	Depth, m	Depth, m
	73ft	

VIDEO LOCATION:
Start Lat. N 45°49.63 Long. W 119°57.89
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45°49.64 Long. W 119°57.86

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Sandy mud - sand fraction up to med to coarse - lots of worm tubes - some well rounded gravel as well

DESCRIPTION OF BOTTOM: Cobbles & boulders with a thin mud cover - one big boulder - fish - big boulder - well rounded material

STILL PHOTOS: Roll No. 5 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
13	0707.30	3040			
14	0708.16	3125			
15	0708.30	3138			
16	0708.58	3205			

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC) Video on bottom	Sample taken	Video off bottom	TAPE COUNTER Start	Stop
39	271	07:16:16	0717:50	0718:12	3236	3424

Depth, m	Depth, m	Depth, m
	34 ft.	

VIDEO LOCATION:
Start Lat. N _____ Long. W _____
End Lat. N 45° 49.51 Long. W 119° 57.90

SAMPLE LOCATION:
Lat. N 45° 49.51 Long. W 119° 57.90

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Partial bucket of well rounded gravel with some cobbles - No fines though - probably washed out - Small amount of sand.

DESCRIPTION OF BOTTOM: Gravel on crest of bar with some cobbles + dusting of mud. Mud cover was very thin.

STILL PHOTOS: Roll No. 5 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
17	0716:50	3304			
18	0717:00	3318			
19	0717:16	3332			
20	0717:32	3349			

STATION LOG Start date 27 Sept 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
40		0724:42	0726.52	0727:16	3424	3646

Depth, m	Depth, m	Depth, m
	67 ft	

VIDEO LOCATION:
Start Lat. N 45°49.26 Long. W 119° 57.94
End Lat. N 45°49.25 Long. W 119° 57.91

SAMPLE LOCATION:
Lat. N _____ Long. W _____

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Mud with 3 cobbles.

DESCRIPTION OF BOTTOM: Cobbles with mud cover.

STILL PHOTOS: Roll No. 5 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
21	0725.42	3523			
22	0725:59	3534			
23	0726:16	3557			
24	0726:38	3618			

cobbles 1. 2x3x1.25" basalt
2 2x2x1 basalt
3 4.5x4x2"
1 big mud sample

STATION LOG Start date 27 Sept 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 (8 mm ____ Hi-8 mm ✓) STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: UTC (PM)

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
41	271	0743:12	0744:34	0744:58	3646	3818

Depth, m	Depth, m	Depth, m
	47 ft	

VIDEO LOCATION:
Start Lat. N 45°49.44' N Long. W 119°56.11' W
End Lat. N 45° 49.44' N Long. W 119° 56.09' W

SAMPLE LOCATION:
Lat. N 45°49.44 Long. W 119° 56.09

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Fine to medium sand

DESCRIPTION OF BOTTOM: Uniform sandy? or muddy? bottom - Lots of pits, but no evidence of exposed cobbles or boulders.

STILL PHOTOS: Roll No. 5 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
25	743:52	3720			
26	0744:02	3734			
27	0744:28	3758			

1 bag collected

STATION LOG Start date 27 Sept, 2000 (JD =)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: UTC (PM)

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
42	271	0805:02	0807:42	0808:10	3818	4110

Depth, m	Depth, m	Depth, m
	57 ft	

VIDEO LOCATION:
Start Lat. N 45° 49.87' N Long. W 119° 56.69' W
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45° 49.88 Long. W 119 54.65

SAMPLES TAKEN:
Texture: ✓ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: ~~No Sample~~ Small amount of fine med sand with some small pebbles.

DESCRIPTION OF BOTTOM: Gravel - boulders - mostly cobbles - thin finer sed cover - 1 fish

New roll of film
STILL PHOTOS: Roll No. 6 Film Type ASA - 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
1	0806:22	3933			
2	0806:34	3944			
3	0807:22	4034			

Ported bag of sample.

STATION LOG Start date 27 Sept 2000 (JD = 271)

CRUISE: ESTERO (00030) **SHIP:** RV ESTERO

VIDEO TAPE NO. 3 (8 mm ____ Hi-8 mm ✓) **STUDY AREA:** John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: _____

STA. NO.	JD	TIME (UTC) Video on bottom	Sample taken	Video off bottom	TAPE COUNTER Start	Stop
43	271	0813:56	0815:34	0815:58	4110	4306

Depth, m	Depth, m	Depth, m
	30 ft	

VIDEO LOCATION:
Start Lat. N _____ Long. W _____
End Lat. N _____ Long. W _____

SAMPLE LOCATION:
Lat. N 45° 49.74 Long. W 119° 54.64

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Gravel (well rounded) with small amount of sand ~~but not enough to sample~~ med-coarse sand

DESCRIPTION OF BOTTOM: gravel with very little cover - well rounded - some cobbles. Some small patches of fine material

STILL PHOTOS: Roll No. 6 Film Type ASA-400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
4	0814:30	4139			
5	0814:44	4157			
6.	0815:18	4227			

1 bag gravel
1 bag - very small amount of med-coarse sand.

STATION LOG Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030) SHIP: RV ESTERO

VIDEO TAPE NO. 3 STUDY AREA: John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
44	271	0824:10	No Samp	0826.46	4306	4544

Depth, m	Depth, m	Depth, m
	67ft	

VIDEO LOCATION:
Start Lat. N 45° 49.53 Long. W 119° 54.71' W
End Lat. N 45° 49.54 Long. W 119° 54.68' W

SAMPLE LOCATION:
Lat. N ____ Long. W ____

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: No Sample - too many boulders.

DESCRIPTION OF BOTTOM: Giant boulder, + 2nd angular boulder. Then some cobbles with set cover. Another boulder.

STILL PHOTOS: Roll No. 6 Film Type ASA -400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
7	0825:20	4410			
8	0825:34	4425			

STATION LOG Start date 27 Sept 2000 (JD = 271)

CRUISE: ESTERO (00030) **SHIP:** RV ESTERO

VIDEO TAPE NO. 3 **STUDY AREA:** John Day Reservoir - Columbia Rive
(8 mm ____ Hi-8 mm ✓)

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: 1 (PM)

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
45	271	0847:58	0850:08	0850.26	4544	4803

Depth, m	Depth, m	Depth, m
	39ft	

VIDEO LOCATION:
Start Lat. N 45°50.31N Long. W 119°52.21'W
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45° 50.30 Long. W 119°52.18

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Gravel with small amount of fine-med sand. Jaw open so some sand washed out

DESCRIPTION OF BOTTOM: Gravel & cobbles with a discontinuous fine sediment cover.

STILL PHOTOS: Roll No. 6 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
9	0848:58	4641			
10	~0849:12	4649			
11	0849:44	4726			

1 bag with gravel + sand combined

STATION LOG

Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030)

SHIP: RV ESTERO

VIDEO TAPE NO. 3
(8 mm ____ Hi-8 mm ✓)

STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
46	271	0901:20		0905:50	4803	5229

Depth, m	Depth, m	Depth, m
	69 ft	

VIDEO LOCATION:
Start Lat. N ____ Long. W ____
End Lat. N 45° 50.10 Long. W 119° 52.14

SAMPLE LOCATION:
Lat. N ____ Long. W ____

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: No Sample - Too coarse

DESCRIPTION OF BOTTOM: Poorly sorted gravel - boulders plus fine material - fine material

STILL PHOTOS: Roll No. 6 Film Type ASA-400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
12	0901:48	4830			
13	0902:10	4850			
14	0902:58	4939			
15	0904:48	5128			

STATION LOG

Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030)

SHIP: RV ESTERO

VIDEO TAPE NO. 3 (8 mm ____ Hi-8 mm ✓)

STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC) Video on bottom	Sample taken	Video off bottom	TAPE COUNTER Start	Stop
47	271	0923:22	0925:08	0925.36 ~~45°50.66~~	5229	5424

Depth, m	Depth, m	Depth, m
	74 ft	

VIDEO LOCATION:
Start Lat. N 45° 50.66 Long. W 119° 50.21
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45° 50.66 Long. W 119° 50.19' W

SAMPLES TAKEN:
Texture: ___ Geochemistry: ___ Organics: ___ Biology: ___

SAMPLING COMMENTS: Gravel & cobbles & fines are med to coarse sand.

DESCRIPTION OF BOTTOM: Gravel with cobbles - thin cover of fines

STILL PHOTOS: Roll No. 6 Film Type ASA-400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
16	0923:54	5259			
17	0924:22	5327			
18	0924:56	5359			

STATION LOG

Start date 27 Sept, 2000 (JD = 271)

CRUISE: ESTERO (00030)

SHIP: RV ESTERO

VIDEO TAPE NO. 3
(8 mm ____ Hi-8 mm ✓)

STUDY AREA: John Day Reservoir - Columbia Rive

PROJECT: SW Washington coastal erosion

DGPS NAV FIX UPDATE INTERVAL: ____

STA. NO.	JD	TIME (UTC)			TAPE COUNTER	
		Video on bottom	Sample taken	Video off bottom	Start	Stop
48	271	0938:00	0940:26	0940:48	5424	5705

Depth, m	Depth, m	Depth, m
	65ft	

VIDEO LOCATION:
Start Lat. N 45° 50.52' N Long. W 119° 50.15' W
End Lat. N ____ Long. W ____

SAMPLE LOCATION:
Lat. N 45° 50.54 Long. W 119° 50.15

SAMPLES TAKEN:
Texture:___ Geochemistry:___ Organics:___ Biology:___

SAMPLING COMMENTS: Sandy mud with cobbles

DESCRIPTION OF BOTTOM: Cobbles covered with fines - everything from gravel to boulders + more covered than last station Patchy

STILL PHOTOS: Roll No. 6 Film Type ASA 400

Photo No.	Time (UTC)	LED/Neg No.	Location (nearest 10-sec fix) Lat. N	Long. W	Depth (m)
19	0939:12	5540			
20	0939:30	5556			
21	0940:06	5633			

1 bag Sample
1. 2.25 x 4 x 1.25" with granite
2. 2.25 x 3.5 x 1.5"