



TETRA TECH

UNDER ICE BED PHOTO SAMPLING

SUSITNA-WATANA
HYDROELECTRIC PROJECT

Date & Time: 3-27-2014 1300

Crew: BK, MP, BT

Sheet 1 of 3

Location: FRM 75.5

Weather: clear

Camera: +- SW6-GoPro

GPS Unit: PDX

Comments: Under ice 8' riprap in holes
centrally hole 8' riprap in holes
centrally hole 4ft deep last 0.4ft

photo 15:18M #1 524 near ET lake at 526 to Holes upstm, 527 E Holes downstm

(A) Sample #	(B) GPS Point #	(D) Snow Depth (ft)	(E) Ice Thickness (ft)	(F) Top of Ice to Bed Distance (ft)	(G) Flow Depth (F-E) (ft)	(H) Frazil Ice Present?	(I) Anchor Ice Present?	(J) Freeboard Height (ft)	(K) Camera Height above Bed (ft)	(L) Video #	(M) Comments / Bed Description
51	1	4	3.1	130	7.7	Y	N	0	3.2	123, 126	123 @ 3ft
52	2	6	3.2	150	9.3	Y	N	1.2	3.2	124, 127	126 @ 2ft 124 @ 3ft
53	3	4	3.2	153	9.6	Y	N	1.2	3.2	125, 128	127 @ 2ft
54	4	14	2.8	155	10.1	Y	N	0	2	129	128 @ 2ft
55	5	4	3.1	153	9.7	Y	N	1.1	2	130	
56	6	6	3.2	148	9.1	Y	N	0	2	134	
57	7	10	2.8	146	9.5	Y	N	1.1	2	135	
58	8	12	2.7	150	9.8	Y	N	1.1	2	136	
59	9	12	3.0	153	9.3	Y	N	1.2	2	137	
510	10	18	2.8	151	9.8	Y	N	0	2	138	
511	11	14	2.5	150	10.0	Y	N	0	2	139	
512	12	16	2.5	152	10.2	Y	N	0	2	140	
513	13	14	2.4	160	10.9	Y	N	-1	2	141	
514	14	10	3.0	148	9.3	Y	N	1.2	2	142	
515	15	13	2.6	153	10.2	Y	N	0	2	143	

QC1

Photo Back up # Kilsner Camera Photo # 391

Date & Time: 3-27-14 13:00
 Location: PRM 75.5
 Camera: H-SWG-Cor-1

Crew: RK MP BT
 Weather: Sunny, Clear, beautiful, killer
 GPS Unit: PDX

Comments:

(A) Sample #	(B) GPS Point #	(D) Snow Depth (ft) <small>in</small>	(E) Ice Thickness (ft)	(F) Top of Ice to Bed Distance (ft) <small>in</small>	(G) Flow Depth (F-E) (ft)	(H) Frazil Ice Present?	(I) Anchor Ice Present?	(J) Freeboard Height (ft)	(K) Camera Height above Bed (ft)	(L) Video #	(M) Comments / Bed Description
516	16	4	3.1	154	9.7	Y	N	0	2	144	
517	17	6	2.9	151	9.7	Y	N	0	2	145	
518	18	8	3.0	150	9.5	Y	N	0	2	146	
519	19	16	2.8	152	9.9	Y	N	0	2	147	
520	20	18	2.4	158	10.8	Y	N	-1	2	148	

QC: *[Signature]*
 Photo Back up # *Highway Camera Photo # 392*

River
left

100'

1000'

Shoal Bank

50' ↓

51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533

150' →

Undulating
ground, fence

Undulating
ground
surface

River Right

VI

Aerial Photos
Kilgus Camera
Photos #

376
377
378
379
380
381
382

Wales Spaced @ 8-10'

DC/MS

Photo back up Kilgus Camera Photo # 393