

MEMORANDUM

RSM

TO

Aquatic Study Team Members

SUBJECT

Eklutna Lake suspended sediment, turbidity,
and temperature data 1982-1984

FROM

Stephen Bredthauer

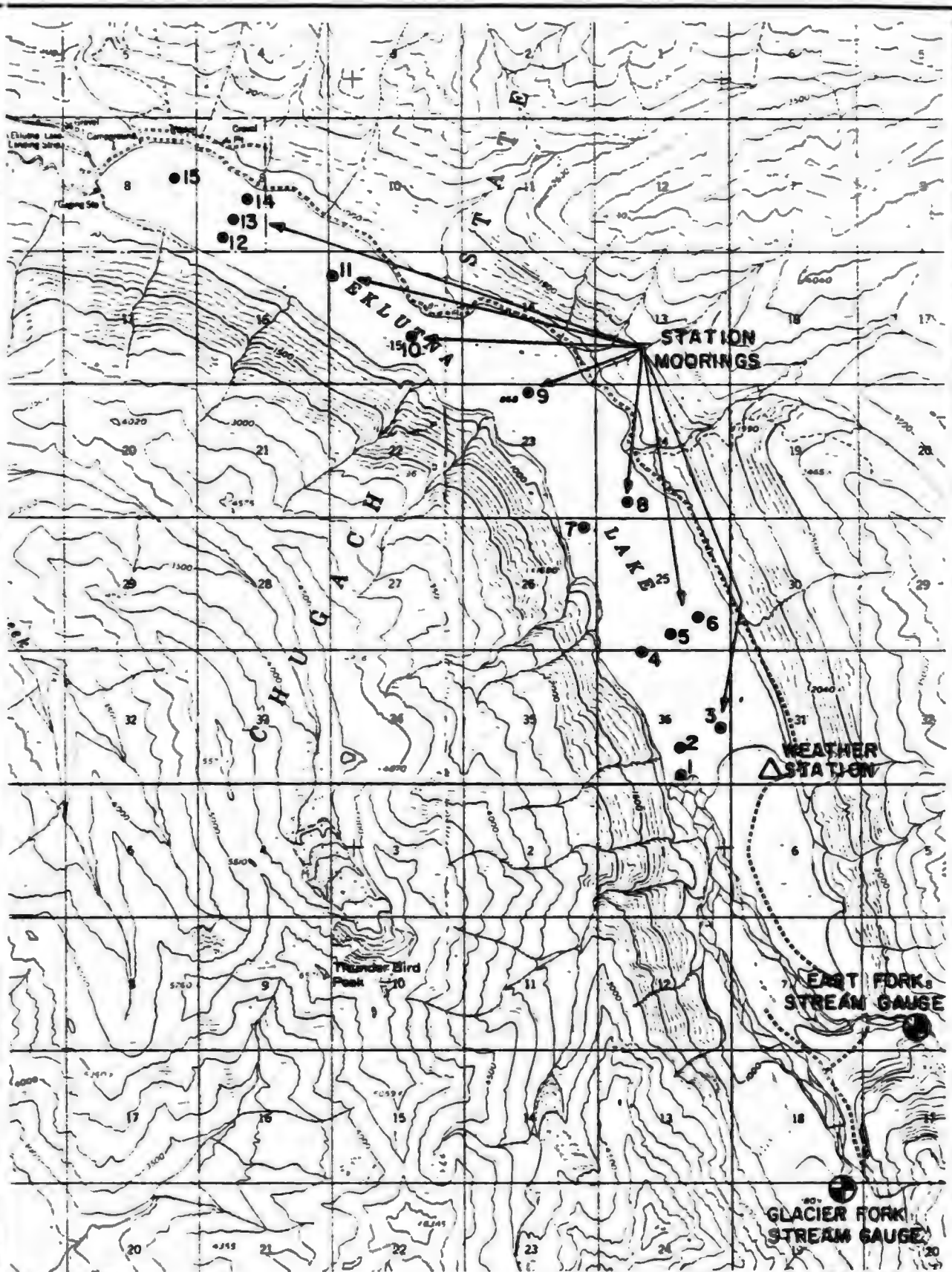
DATE

5-1-85

PROJECT NO.

452418

Enclosed are summary data sheets and plots from the data collection program at Eklutna Lake. These plots summarize the temperature, turbidity, suspended sediment, and light penetration patterns observed at Eklutna Lake from 1982-1984. The complete data report will be submitted later this month. If there are any questions, please contact Jeff Coffin or Bill Ashton at 561-1733



PREPARED BY:

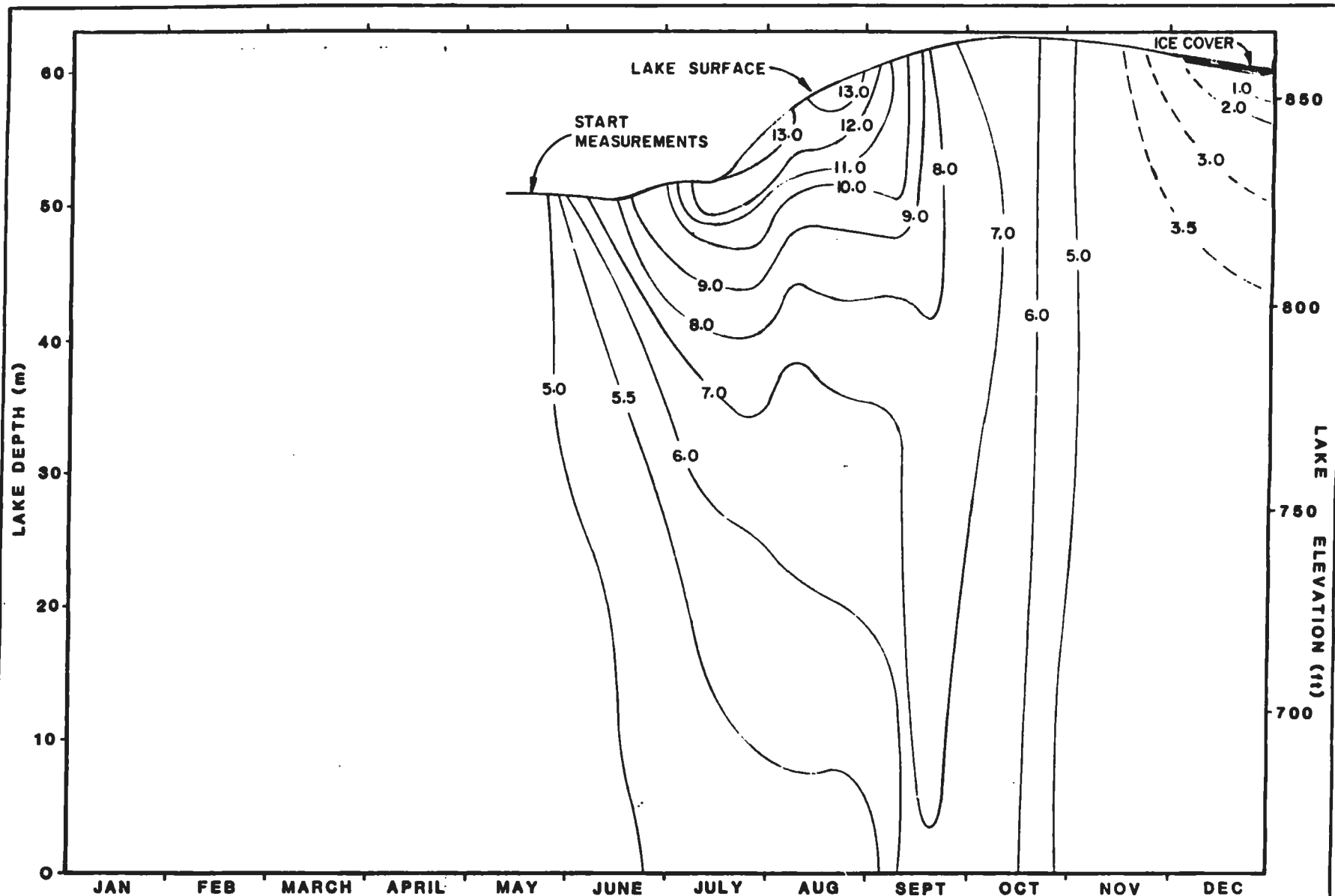
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EKLUTNA LAKE STATION LOCATIONS

FIG. 3.1





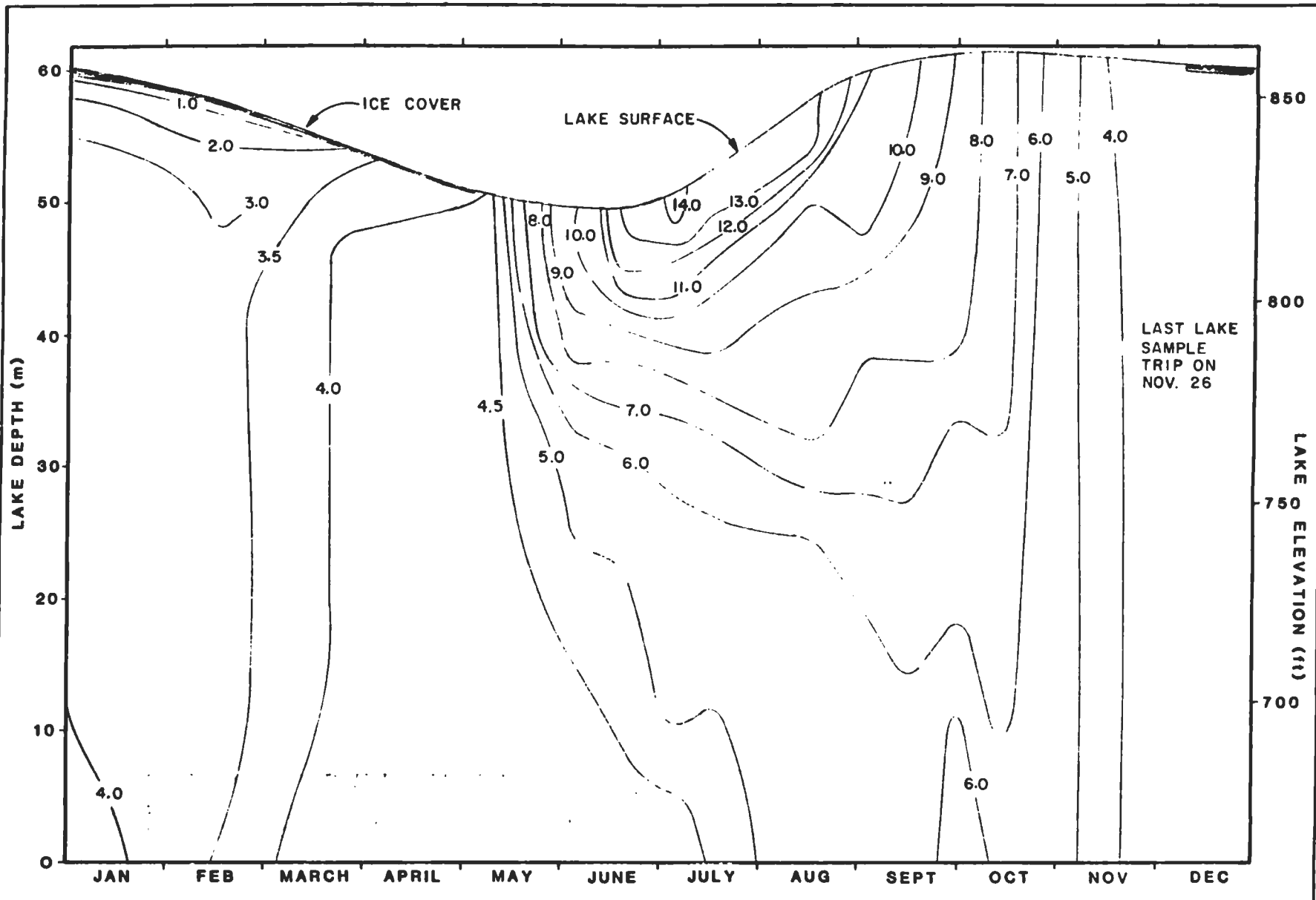
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**ISOTHERM DEPTH vs. TIME
 EKLUTNA LAKE at STATION 9
 1982**

PREPARED FOR:

HARZA-EBASCO
 SUSITNA JOINT VENTURE



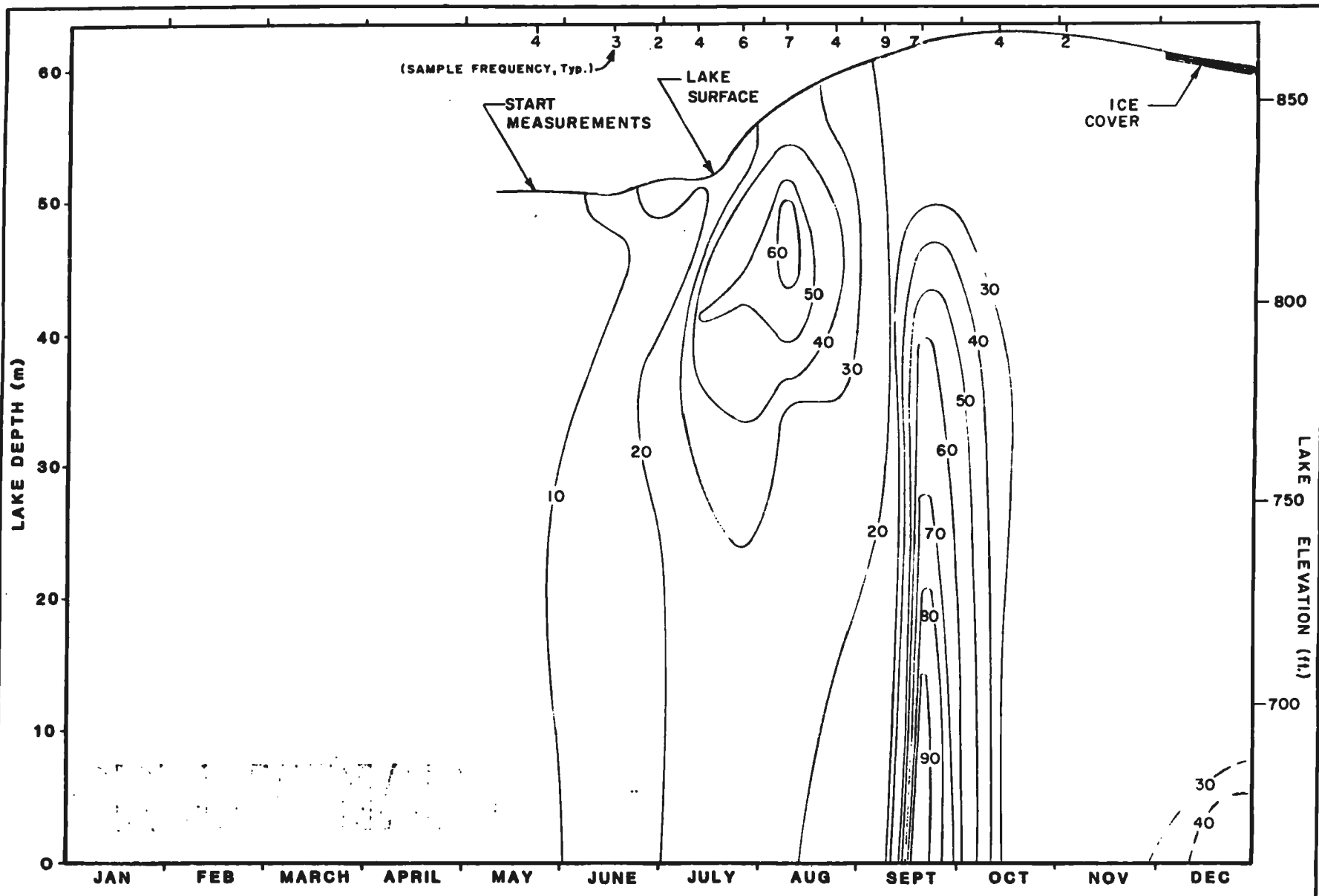
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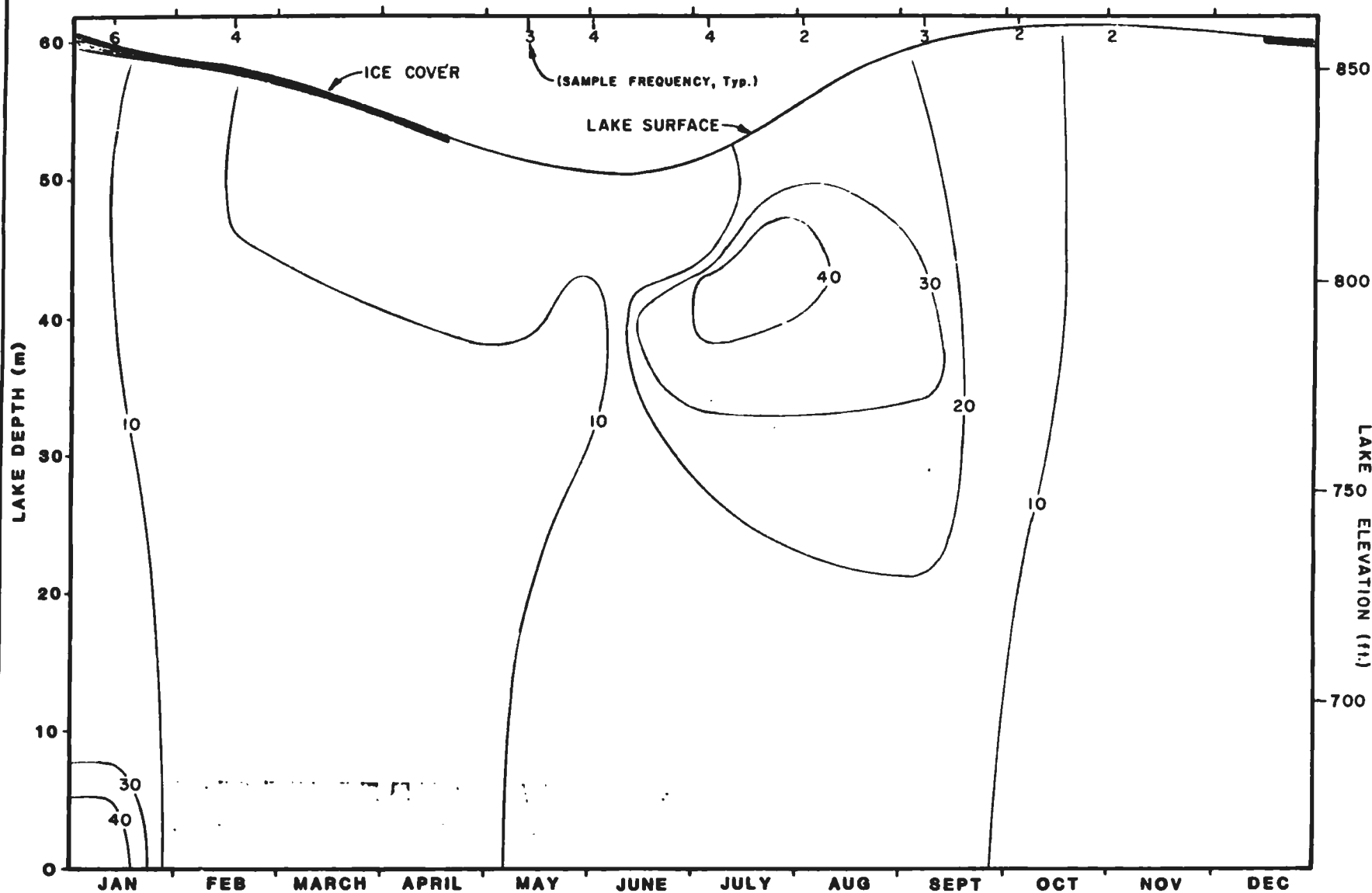
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ISO-TURBIDITY vs. TIME
EKLUTNA LAKE at STATION 9
1982

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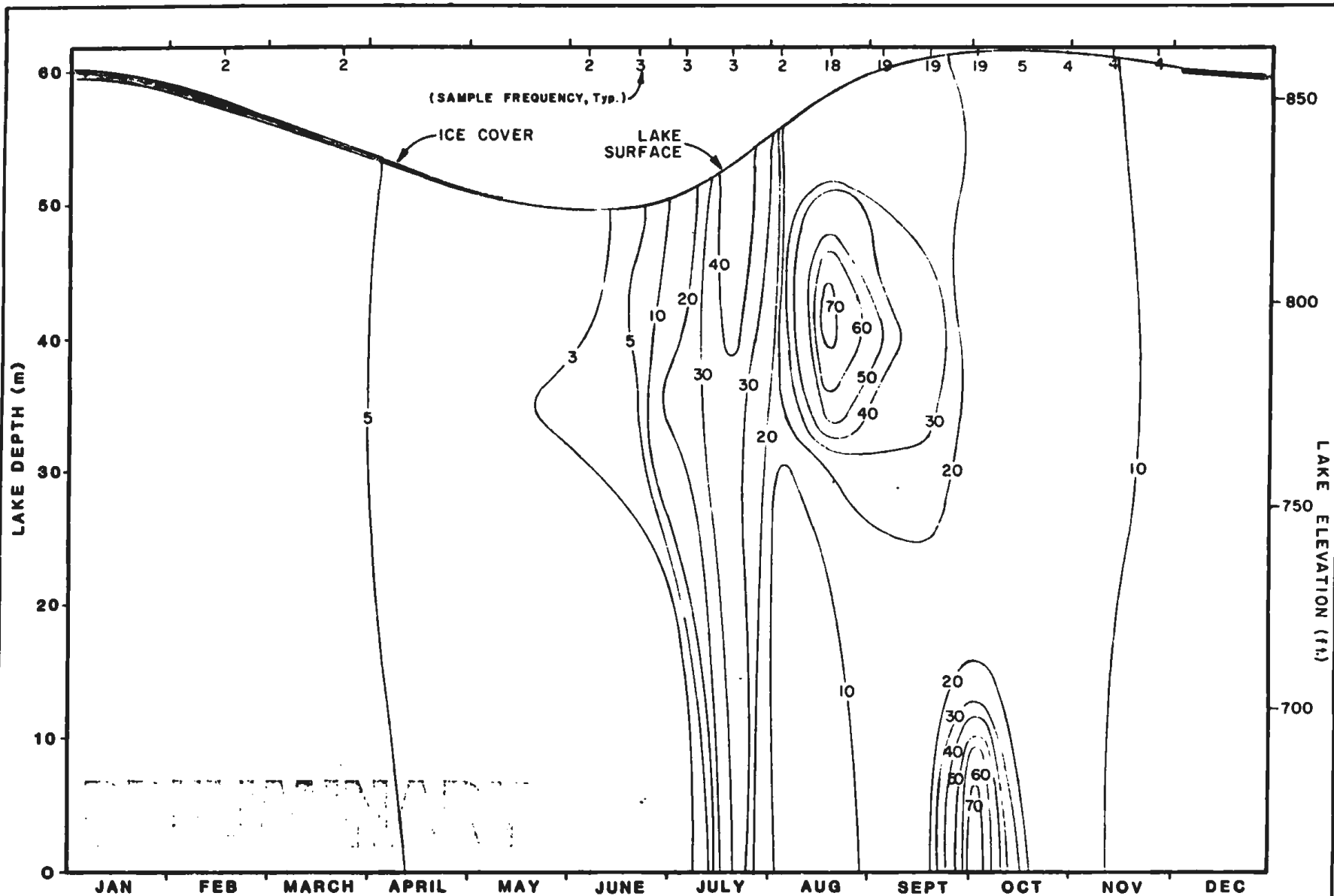
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ISO-TURBIDITY vs. TIME
EKLUTNA LAKE at STATION 9
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ISO-TURBIDITY vs. TIME
EKLUTNA LAKE at STATION 9
1984

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M14/56

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: March, 1984

1. LAKE DATA - GENERAL

Date	Lake Elevation	Lake Depth	Q in (Mean Daily) 3 3	Q in (Mean Daily)	Q out (Mean Daily) 3 3	Q out (Mean Daily)	Stations	Weather	Remarks
<u>Sampled</u>	<u>(ft.msl)</u>	<u>(m)</u>	<u>(10 m /day)</u>	<u>(cfs)</u>	<u>(10 m /day)</u>	<u>(cfs)</u>	<u>Profiled</u>		
3/23	837.9	54.2			1261	516	2,5,9,15	Clear & calm.	

2. LAKE DATA SUMMARY - TURBIDITY/SEDIMENT

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
3/23	1315	5	20	4.0	N/A	N/A	N/A	N/A	3.2	3.7	Ice thickness= 16".
			40	3.9	N/A	N/A	N/A	N/A	6.1	2.7	
	1030	9	20	4.0	N/A	N/A	N/A	N/A	4.2	2.1	Ice thickness= 18".
			40	4.1	N/A	N/A	N/A	N/A	4.2	2.3	
	0920	15	5	4.1	N/A	N/A	N/A	N/A	3.1	2.8	Ice thickness= 18".

NOTE: N/A = Not Available.

M14/56

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: April, 1984

1. LAKE DATA - GENERAL

Date	Lake Elevation	Lake Depth	Q in (Mean Daily) 3 3	Q in (Mean Daily)	Q out (Mean Daily) 3 3	Q out (Mean Daily)	Stations	Weather	Remarks
Sampled	(ft,msl)	(m)	(10 m /day)	(cfs)	(10 m /day)	(cfs)	Profiled		
4/20/84	830.8	51.1m	120 (est.)	49 (est.)	1164	476	15 & 11	Overcast, light breeze	Ice Thickness= 13.5-14"

2. LAKE DATA SUMMARY - TURBIDITY/SEDIMENT

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
4/20	1110	15	1	3.0	N/A	7.5	0.66	6.2	2.1	1.3	Ice = 14' Secchi and quantum done through ice.
			5	3.4	131				1.8	0.47	
	1330	11	2	3.6	129	6.8	0.60	7.05	2.6	1.1	Ice = 13.5" secchi and quantum done through ice.
			24	3.3	N/A				1.8	0.55	

NOTE: N/A = Not Available.

SUMMARY

M14/56

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: May, 1984

1. LAKE DATA - GENERAL

Date	Lake Elevation	Lake Depth	Q in (Mean Daily) 3 3	Q in (Mean Daily)	Q out (Mean Daily) 3 3	Q out (Mean Daily)	Stations	Weather	Remarks
Sampled	(ft.msl)	(m)	(10 m /day)	(cfs)	(10 m /day)	(cfs)	Profiled		
5/17/84	826.1	50.6m	245 (est.)	100 (est.)	1102	450	5,9&15	Sunny, clear	

2. LAKE DATA SUMMARY - TURBIDITY/SEDIMENT

Date	Time AST	Station	Depth (m)	Temp. °C	Cond'. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
5/17/84	1415	5	4 20	5.1 4.2	127 127	6.7	0.38	9 m	2.5 2.1	1.0 2.0	Var. sun- shine during quantum.
	1050	9	4 20	6.3 4.7	130 130	6.4	0.43	9 m	3.8 3.5	1.7 2.0	
	1245	15	4	6.9	130	7.0	0.47	6.4 m	3.0	1.5	bottom - 6.4m

3. INFLOW/OUTFLOW DATA

Date	Time AST	Site	Gage Height (ft)	Instant. Q (cfs)	Mean Daily Q (cfs)	Water Temp. (°C)	Conductivity @ 25°C (umho/cm)	Secchi Disk (ft)	Turbidity (NTU)	TSS (mg/l)	Remarks
5/18	1200	EF	2.43	77	65	5.7	153	N/A	2.9	3.7	Gaging stations installed Q's from measurements
	1700	GF	2.00	16	N/A	7.4	77	N/A	38	48	
5/22	N/A	EF	2.48	73	73	5.6	140	N/A	3.2	2.2	
"	N/A	GF	2.07	20	20	2.2	93	N/A	45	18.9	
	N/A	TR	N/A			6.7	129	N/A	4.2	2.5	
5/25	N/A	EF	2.49	74	74	4.4	N/A	N/A	N/A	2.3	
	N/A	GF	2.03	18	18	3.9	N/A	N/A	N/A	11	
	N/A	TR	N/A			6.1	N/A	N/A	N/A	2.4	
5/29	N/A	EF	2.47	71	71	2.0	132	N/A	2.7	0.8	
	N/A	GF	1.93	14	14	0.0	113	N/A	22	6.4	
	N/A	TR	N/A			7.2	148	N/A	3.7	1.6	

NOTE: Abbreviations used - N/A Not Available, EF = East Fork, GF = Glacier Fork, TR = Tailrace, TSS = Total Suspended Solids.

M14/56

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: June, 1984

1. LAKE DATA - GENERAL

Date	Lake Elevation	Lake Depth	Q in (Mean Daily) 3 3 (10 m /day)	Q in (Mean Daily) (cfs)	Q out (Mean Daily) 3 3 (10 m /day)	Q out (Mean Daily) (cfs)	Stations	Weather	Remarks
Sampled	(ft,msl)	(m)					Profiled		
6/6/84	824.4	50.1	784	320	937	383	2,5,9,11, 15	100% overcast light rain, moderate wind from North.	Q in only for EF and GF
6/21/84	823.1	49.7	1634	668	1075	439	1,2,3,9, 15	Mostly clear, light wind from NW	Q includes EF, GF, and est. Q for 3 streams on the north shore.

2. LAKE DATA SUMMARY - TURBIDITY/SEDIMENT

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
6/6/84	N/A	2	0	11.1	140	7.5	N/A	N/A	3.3	2.0	
			13.5	6.6	140	-	-	-	4.4	N/A	
	N/A	5	0	10.7	141	9.0	N/A	N/A	2.1	1.3	
			9	8.1	145	-	-	-	4.3	3.1	
	N/A	9	0	10.0	141	8.0	N/A	N/A	2.1	1.9	
			13	7.5	141	-	-	-	2.3	N/A	
	N/A	11	0	9.8	135	8.5	N/A	N/A	2.1	1.4	
			3	8.2	138	-	-	-	2.2	N/A	
	N/A	15	0	9.3	132	8.5	N/A	N/A	5.2	2.5	
6/21/84	1725	1	11	8.0	120	3.2	1.76	2.8	71	134	
	1620	2	10	10.0	108	3.6	1.04	4.8	30	25	
			14	6.9	109	-	-	-	15	13	
			20	6.0	115	-	-	-	6.4	14	
	1510	3	2	13.9	104	3.8	1.33	3.7	7.2	4.8	
			7	12.4	107	-	-	-	14	10	
			12	8.7	112	-	-	-	28	24	
			20	5.6	N/A	-	-	-	6.2	8.1	
	1250	9	2	12.9	107	6.0	0.73	6.4	4.8	3.0	
			6	11.4	116	-	-	-	6.2	3.3	
			20	5.6	119	-	-	-	3.4	1.3	
		15	4	11.1	116	4.5	0.71	6.3	5.0	3.1	

1984
 MONTHLY SUMMARY
 1984

3. INFLOW/OUTFLOW DATA

Month: June, 1984

Date	Time AST	Site	Gage Height (ft)	Instant. Q (cfs)	Mean Daily Q (cfs)	Water Temp. (°C)	Conductivity @ 25°C (umho/cm)	Secchi Disk (ft)	Turbidity (NTU)	TSS (mg/l)	Remarks
6/1	1200	EF	2.43	83	87	7.1	N/A	N/A	4.8	3.2	
	1100	GF	1.90	13	17	5.9	N/A	N/A	32	7.6	
	N/A	TR	N/A	N/A	375	7.8	N/A	N/A	4.3	0.9	
6/5	1128	EF	2.73	162	162	6.4	120	N/A	12	12	
	1025	GF	N/A	N/A	58	2.6	71	N/A	77	77	
	N/A	TR	N/A	N/A	345	N/A	128	N/A	4.0	1.5	
6/8	1245	EF	2.71	155	165	5.6	123	N/A	12	4.0	
	1220	GF	3.05	113	102	1.9	81	N/A	120	301	
	1444	TR	N/A	N/A	392	8.5	150	N/A	3.0	0.5	
6/12	1130	EF	2.80	187	187	5.1	110	1.5	2.4	12	
	1250	GF	3.08	118	118	1.9	64	0.4	120	128	
	N/A	TR	N/A	N/A	405	11.3	144	4.0+	4.6	2	
6/15	1255	EF	2.78	179	179	4.8	108	1.5	21	6	
	1335	GF	3.07	116	111	1.6	60	0.4	140	135	
	1547	TR	N/A	N/A	480	11.6	144	4.0+	5.6	2	
6/19	1050	EF	2.92	237	261	6.2	104	1.1	34	26	
	1130	GF	3.37	177	194	2.4	77	0.2	500	526	
	1410	TR	N/A	N/A	460	11.2	143	4.0	8	4.0	
6/22	1050	EF	2.97	261	304	5.9	91	0.5	78	77	
	1050	GF	3.66	256	256	2.3	59	0.3	180	154	
	1355	TR	N/A	N/A	430	12.8	149	3.3	8.0	2.4	
6/26	1045	EF	3.09	327	346	4.1	86	0.3	290	257	
	1130	GF	3.84	317	252	1.4	66	0.25	420	341	
	N/A	TR	N/A	0	0	-	-	-	-	-	Power plant shut down.
6/29	1000	EF	2.99	271	310	5.5	80	0.5	130	83	
	1025	GF	3.90	340	356	2.4	55	0.25	350	297	
	N/A	TR	N/A	N/A	184	N/A	N/A	N/A	N/A	N/A	No sample taken.

NOTE: Abbreviations used - N/A Not Available, EF = East Fork, GF = Glacier Fork, TR = Tailrace, TSS = Total Suspended Solids.

EXHIBIT 1

MONTHLY SUMMARY OF PROVISIONAL FIELD OBSERVATIONS - EKLUTNA LAKE

Month: July 1984

1. LAKE DATA - GENERAL

Date	Lake Elevation	Lake Depth	Q in (Mean Daily) 3 3	Q in (Mean Daily)	Q out (Mean Daily) 3 3	Q out (Mean Daily)	Stations		
<u>Sampled</u>	<u>(ft,msl)</u>	<u>(m)</u>	<u>(10 m /day)</u>	<u>(cfs)</u>	<u>(10 m /day)</u>	<u>(cfs)</u>	<u>Profiled</u>	<u>Weather</u>	<u>Remarks</u>
7/5/84	826.4	50.7	2,560	1,046	1,074	439	1,2,3,9,15	Clear to overcast, winds first out of WSW, then NNW	Qin does not include streams on the north shore
7/19/84	835.1	53.4	1,956	799	406	166	1,2,3,9,15	Overcast, some drizzle winds from calm to strong, from the NW.	Lake elevation is that given for 7/20 in the AP Admin monthly summary. Qin includes the two major streams draining the north shore.

2. LAKE DATA SUMMARY - TURBIDITY/SEDIMENT

Date	Time AST	Station	Depth (m)	Temp. °C	Cond.(@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction	Turbidity (NTU)	TSS (mg/l)	Remarks
7/05/84	1730	1	20	9.6	111	2.5	1.96	2.5	128	202	
	1600	2	4.0	15.1	71	2.0	1.45	3.1	6.4	5.0	
	-	-	9.0	12.4	110	-	-	-	80	115	
	-	-	20	5.8	131	-	-	-	6.8	8.0	
	1445	3	2.0	15.0	145	2.0	1.43	3.1	6.6	6.0	
	-	-	8.0	11.3	75	-	-	-	22	13	
	-	-	16	8.0	116	-	-	-	18	22	
	-	-	24	5.4	126	-	-	-	3.5	5.0	
	1330	9	2.0	14.0	154	1.9	1.51	3.1	13	9.0	
	-	-	14	7.9	106	-	-	-	26	15	
	-	-	32	5.4	127	-	-	-	3.4	3.0	
	1220	15	4.0	11.9	153	1.6	1.59	2.8	14	8.0	
	-	-	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	-	-	
7/19/84	1515	1	2.0	14.2	128	1.2	2.18	2.0	26	3.0	
	-	-	6.0	7.0	112	-	-	-	64	29	
	1400	2	6.0	13.9	125	1.3	2.13	2.1	28	2.0	
	-	-	10	10.5	113	-	-	-	61	25	
	-	-	16	8.3	119	-	-	-	56	7.7	
	-	-	28	5.6	132	-	-	-	18	3.6	
	1300	3	2.0	14.0	128	1.3	1.99	2.2	26	2.1	
	-	-	8.0	11.6	125	-	-	-	58	4.9	
	-	-	16	8.3	116	-	-	-	58	12.4	
	-	-	28	5.3	125	-	-	-	16	5.0	
	-	-	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	-	-	

PRELIMINARY

MONTHLY SUMMARY OF PROVISIONAL FIELD OBSERVATIONS - EKLUTNA LAKE

Month: July 1984

2. LAKE DATA SUMMARY - TURBIDITY/SEDIMENT (Continued)

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction	Turbidity (NTU)	TSS (mg/l)	Remarks
7/19/84	1050	9	4.0	12.9	125	1.2	2.24	2.02	52	3.3	The light extinction measurements were run twice yielding different values.
	-	-	16.0	8.6	125	-	2.25	1.98	37	4.6	
	-	-	36.0	5.5	125	-	-	-	35	3.8	
	0950	15	4.0	11.8	125	1.3	2.43	1.89	56	4.4	

3. INFLOW/OUTFLOW DATA

Date	Time AST	Site	Gage Height (ft)	Instant. Q (cfs)	Mean Daily Q (cfs)	Water Temp. (°C)	Conductivity @ 25°C (umho/cm)	Secchi Disk (ft)	Turbidity (NTU)	TSS (mg/l)	Remarks
7/3/84	1045	EF	2.90	228	228	4.9	85	0.5	88	48	Gage height from staff near the right edge of water
	1120	GF	3.94	356	356	1.4	34	0.2	580	514	
	N/A	TR	1.84	N/A	434	11.9	144	1.8	18	6.0	
7/6/84	0920	EF	3.26	444	519	6.4	N/A	0.2	140	156	Temp at 1110 AST Secchi from LB d/s of bridge
	1610	GF	4.54	674	597	1.6	N/A	0.2	430	568	
	2014	TR	1.90	N/A	355	12.2	N/A	1.8	17	4.7	
7/10/84	1119	EF	3.27	452	460	6.0	78	0.5	88	72.5	Temp, turb, TSS, Cond & Secchi from LB 10m d/s of bridge
	1226	GF	4.46	622	603	N/A	55	0.2	500	572	
	1518	TR	1.73	N/A	156	N/A	142	1.4	22	9.0	
7/13/84	1056	EF	3.11	340	359	5.0	75	0.5	64	53	T=Tryan + 0.5°C
	1207	GF	4.23	490	480	N/A	49	0.2	430	417	
	1425	TR	1.19	N/A	160	N/A	143	1.1	28	18	
7/17/84	0953	EF	3.06	310	321	4.6	76	0.5	66	50	
	1050	GF	4.07	412	417	0.9	44	0.3	220	248	
	1319	TR	0.91	N/A	156	10.0	134	1.3	31	9.0	

NOTE: Abbreviations used - N/A = Not Available, EF = East Fork, GF = Glacier Fork, TR = Tailrace, TSS = Total Suspended Solids.

PRELIMINARY

MONTHLY SUMMARY OF PROVISIONAL FIELD OBSERVATIONS - EKLUTNA LAKE

Month: July 1984

3. INFLOW/OUTFLOW DATA (Continued)

Date	Time AST	Site	Gage Height (ft)	Instant. Q (cfs)	Mean Daily Q (cfs)	Water Temp. (°C)	Conductivity @ 25°C (umho/cm)	Secchi Disk (ft)	Turbidity (NTU)	TSS (mg/l)	Remarks
7/20/84	1600	EF	3.08	321	304	6.1	75	0.8	98	45	
	1640	GF	4.16	455	431	0.8	35	0.4	216	264	
	1800	EF	3.09	327		5.6	74	0.7	110	61	
	1830	GF	4.10	426		1.6	34	0.4	224	246	
	2000	EF	3.09	327		5.6	73	0.7	110	64	
	2030	GF	4.15	450		1.6	34	0.4	232	216	
	2200	EF	3.08	321		5.6	73	0.6	108	50	
	2230	GF	4.11	431		1.6	38	0.4	224	216	
	2400	EF	3.07	316		5.0	74	N/A	108	50	
7/21/84	0030	GF	4.11	431	511	1.6	38	N/A	230	226	
	0200	EF	3.06	310	372	5.0	74	N/A	105	45	
	0230	GF	4.10	426		1.6	38	N/A	250	213	
	0400	EF	3.06	310		4.4	78	0.7	107	42	
	0430	GF	4.11	431		1.6	38	0.4	240	259	
	0545	FF	3.06	310		4.4	78	0.7	83	38	
	0610	GF	4.12	436		1.6	41	0.4	210	263	
	0830	EF	3.05	304		5.3	82	0.8	66	46	
	0900	GF	4.14	445		1.4	37	0.3	250	247	
	1030	EF	3.07	316		6.4	71	0.7	73	45	
	1100	GF	4.21	480		1.9	39	0.3	260	293	
	1230	EF	3.12	346		8.3	69	0.5	102	73	
	1300	GF	4.32	539		2.5	32	0.3	250	271	
	1430	EF	3.16	372		8.9	69	0.5	124	102	
	1500	GF	4.35	556		2.5	30	0.3	260	313	
	1630	EF	3.21	407		8.9	61	0.4	160	188	
	1700	GF	4.39	579		1.6	27	0.3	310	493	
	2000	TR	0.72	N/A	144	11.9	135	1.2	31	6.1	
7/24/84	1010	EF	3.20	400	444	5.8	62	N/A	196	132	
	1120	GF	4.39	579	591	1.8	34	0.3	370	228	
	1440	TR	1.49	N/A	164	11.7	130	1.4	36	6.8	
7/27/84	1010	EF	3.11	340	379	5.6	67	0.5	44	53	All cond & turb values for these dates are from Chem/Geo.
	1050	GF	4.31	533	533	1.7	36	0.3	144	297	
	1320	TR	1.21	N/A	144	11.4	130	1.4	20	36	
7/31/84	1025	EF	3.16	372	400	6.1	56	0.6	50	58	
	1105	GF	4.33	545	550	1.7	34	0.2	146	373	
	1410	TR	1.41	N/A	147	11.4	120	1.4	18	3.3	

NOTE: Abbreviations used - N/A = Not Available, EF = East Fork, GF = Glacier Fork, TR = Tailrace, TSS = Total Suspended Solids. Chem/Geo = Chemicals & Geological Laboratories of Alaska, Inc., d/s = Downstream, LB = Left Bank, RB = Right Bank

PROVISIONAL SUMMARY

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: August, 1984

1. LAKE DATA - GENERAL

Date	Lake Elevation	Lake Depth	Q in (Mean Daily) 3 3	Q in (Mean Daily)	Q out (Mean Daily) 3 3	Q out (Mean Daily)	Stations	Weather
<u>Sampled</u>	<u>(ft. msl)</u>	<u>(m)</u>	<u>(10 m /day)</u>	<u>(cfs)</u>	<u>(10 m /day)</u>	<u>(cfs)</u>	<u>Profiled</u>	<u>Weather</u>
8/3	840.6	55.0	3040	1243	329	134	1,2,3,9,15	Overcast. Calm in the morning, strong-wind out the W in the afternoon, abating in the evening.
8/16- 8/20	845.2- 849.8	56.4- 57.9	2790-4360 Qm=3575	1140-1782 Qm = 1461	340-347 Qm=345	139-142 Qm=141	1-15	8/16. Mostly sunny with a light wind from the east. Waves approx. 0.2ft. 8/17. Mostly cloudy to overcast. Light to strong wind moving from SSE early to WNW in the afternoon, to NNW in the evening. NW later. 8/18. Overcast. Strong wind first from NNW, then shifting at 1050 to blow from SSE. Waves 1-2 ft. 8/19. Light rain in the morning, ending after noon. Winds from NNW calm early building in the afternoon raising the wave height from 0.1 to 1 ft. 8/20. Mostly cloudy. Wind shifted from SSE in the morning to NW after noon.

2. LAKE DATA SUMMARY

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
8/03	1130	1	1.0	15.0	137	1.9	2.75	1.9	9.5	3.7	
			3.0	9.0	116				29	41	
	1300	2	4.0	14.5	133	1.7	1.78	2.7	9.8	2.6	
			8.0	11.1	125				20	14	
			16	10.2	106				48	66	
			32	6.0	138				5.6	11	
	1500	3	2.0	15.7	135	2.0	1.85	2.5	11	2.4	
			8.0	11.1	121				22	22	
			16	9.5	103				43	56	
			28	6.3	132				8.7	9.5	
	1700	9	6.0	11.7	120	1.8	2.05	2.1	22	8.0	

LIBRARY

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: August 1984

2. LAKE DATA SUMMARY

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
8/03	2100	15	28	6.4	136				7.4	3.5	
			4.0	11.9	131	1.5	2.47	1.8	13	2.3	
8/16	1740	15	6.0	11.1	105	1.4	2.58	1.8	46	11	
8/17	0910	14	2.0	13.8	137	1.3	2.28	2.1	38	4.2	
			10	9.7	139				47	8.7	
			20	8.4	126				58	11	
	1150	13	2.0	14.2	118	1.4	2.29	1.8	30	4.2	
			12	9.4	130				44	5.5	
			28	7.2	127				25	6.4	
			2.0	13.6	133	1.3	N/A	N/A	32	3.9	
	1600	11	16	8.6	109				47	4.4	
			6.0	11.7	126	1.4	2.11	2.1	42	13	
			16	9.2	113				35	3.9	
			36	5.6	130				9.0	1.2	
	1900	10	30	6.1	122	1.6	2.17	2.0	10.2	2.0	
8/18	0910	9	6.0	10.2	129	1.5	2.34	1.9	30	5.9	
			16	8.7	116				75	31	
			44	5.4	136				5.5	1.1	
8/19	1250	8	6.0	11.0	128	1.5	N/A	N/A	56	26	
			24	7.9	125				56	27	
			44	5.4	147				4.7	1.9	
	1000	7	6.0	11.5	131	1.1	N/A	N/A	35	3.9	
			20	8.7	132				48	21	
			40	5.4	149				5.3	2.3	
	1500	6	2.0	10.6	131	1.0	N/A	N/A	48	23	
			20	9.2	120				70	35	
			44	6.4	143				25	21	
			4.0	11.5	130	1.1	N/A	N/A	40	13	
	1750	5	24	8.7	121				65	30	
			44	5.8	154				10.5	4.0	
8/20	1020	4	8.0	12.1	133	1.6	N/A	N/A	37	7.8	
			24	8.0	136				50	28	
			44	5.4	160				8.5	3.0	
	1240	3	6	12.2	121	1.4	N/A	N/A	40	6.8	
			20	8.4	113				72	40	
			30	6.0	148				11.5	10	
	1430	2	2	12.8	132	1.4	N/A	N/A	36	8.0	
			16	9.4	109				115	61	
			36	5.8	140				12.5	11	
	1630	1	1	12.8	134	1.5	N/A	N/A	36	9.4	
			6	12.8	136				35	4.0	
			12	12.0	127				100	47	

SUMMARY

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

3. INFLOW/OUTFLOW DATA

MONTH: August, 1984

Date	Time AST	Site	Gage Height (ft)	Instant. Q (cfs)	Mean Daily Q (cfs)	Water Temp. (°C)	Conductivity @ 25°C (umho/cm)	Secchi Disk (ft)	Turbidity (NTU)	TSS (mg/l)	Remarks
8/3	1134	EF	N/A	N/A	476	7.0	N/A	N/A	70	126	Mean Daily Q is estimated for EF
	1237	GF	4.61	722	687	2.7	N/A	N/A	130	380	
	1520	TR	1.57	N/A	134	11.5	N/A	N/A	16	4.2	
8/7	1030	EF	3.36	527	483	6.5	50	0.3	85	143	Mean daily Q estimated for EF
	1300	GF	4.74	818	772	2.7	20	0.2	156	470	
	1530	TR	1.80	N/A	146	11.4	121	1.3	20	5.1	
8/10	1121	EF	3.28	460	493	5.1	N/A	0.6	55	75	
	1210	GF	4.55	680	694	1.4	N/A	0.2	140	370	
	1410	TR	1.67	N/A	143	10.8	N/A	1.4	19	3.2	
8/14	1015	EF	3.10	333	365	4.7	65	0.6	76	44	
	1100	GF	4.29	522	562	1.6	27	0.3	196	262	
	1200	EF	3.13	352		6.2	61	0.6	84	89	
	1230	GF	4.41	591		1.9	24	0.2	220	217	
	1400	EF	3.17	379		7.5	60	0.6	104	56	
	1500	GF	4.45	616		1.7	24	0.2	228	349	
	1600	EF	3.20	400		7.5	57	0.6	96	82	
	1700	GF	4.49	641		1.4	21	0.4	220	336	
	1800	EF	3.24	429		6.8	55	0.5	132	123	
	1900	GF	4.45	616		1.3	19	0.3	204	290	
	1930	EF	3.25	436		5.9	58	0.4	120	110	
	2015	GF	4.46	622		1.2	21	0.4	180	235	
	2300	EF	3.24	429		4.5	64	N/A	116	N/A	
	2330	GF	4.35	556		1.1	26	N/A	188	N/A	
	2400	EF	3.22	414		4.4	61	N/A	108	78	
8/15	0030	GF	4.34	550	562	1.0	26	N/A	160	215	Staff gage removed from TR.
	0200	EF	3.18	385	392	4.1	64	N/A	120	96	
	0230	GF	4.28	517		1.0	31	N/A	180	228	
	0430	EF	3.16	372		4.0	61	N/A	96	66	
	0500	GF	4.26	506		0.9	N/A	N/A	180	244	
	0600	EF	3.14	359		3.9	64	0.5	80	51	
	0630	GF	4.22	485		1.0	31	0.3	188	226	
	0800	EF	3.12	346		3.9	64	0.5	88	48	
	0830	GF	4.20	475		1.0	26	0.3	192	216	
	1000	EF	3.12	346		4.6	72	0.6	66	51	
	1030	GF	4.22	485		1.3	42	0.2	196	225	
	1200	EF	3.14	359		6.5	113	0.6	72	48	
	1230	GF	4.38	573		1.8	89	0.2	180	331	
	N/A	TR	N/A	N/A	146	10.0	N/A	1.1	26	3.0	
8/17	1130	EF	N/A	N/A	421	5.8	N/A	N/A	100	64	
	1215	GF	4.47	628	609	1.5	N/A	N/A	205	247	
	1440	TR	N/A	N/A	143	9.5	N/A	N/A	38	26	

NOTE: Abbreviations used - N/A = Not Available, EF = East Fork, GF = Glacier Fork, TR = Tailrace, TSS = Total Suspended Solids.

Preliminary

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: August, 1984

3. INFLOW/OUTFLOW DATA (Continued)

<u>Date</u>	<u>Time AST</u>	<u>Site</u>	<u>Gage Height (ft)</u>	<u>Instant. Q (cfs)</u>	<u>Mean Daily Q (cfs)</u>	<u>Water Temp. (°C)</u>	<u>Conductivity @ 25°C(umho/cm)</u>	<u>Secchi Disk (ft)</u>	<u>Turbidity (NTU)</u>	<u>TSS (mg/l)</u>	<u>Remarks</u>
8/21	1035	EF	3.12	346	392	4.8	N/A	0.7	110	91	
	1111	GF	4.41	591	597	1.5	N/A	0.3	370	429	
	1307	TR	N/A	N/A	143	11.4	N/A	1.4	46	19	
8/24	1110	EF	3.06	310	519	5.0	N/A	1.0	53	76	
	1200	GF	4.55	680	707	2.0	N/A	0.5	170	270	
	1410	TR	N/A	N/A	139	10.5	N/A	1.1	12	15	
8/28	1030	EF	2.86	211	219	3.7	N/A	0.9	27	18	Q Inst. From discharge measurements on EF & GF
	1300	GF	4.01	386	381	1.4	N/A	0.2	220	280	
	1930	TR	N/A	N/A	146	10.3	N/A	1.3	26	5.0	

NOTE: Abbreviations used - N/A = Not Available, EF = East Fork, GF = Glacier Fork, TR = Tailrace, TSS = Total Suspended Solids.
Chem/Geo = Chemical & Geological Laboratories of Alaska, Inc., d/s = Downstream, LB = Left Bank, RB = Right Bank

SUMMARY

M14/30

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: September, 1984

1. LAKE DATA - GENERAL

Date	Lake Elevation	Lake Depth	Q in (Mean Daily) 3 3 (10 m /day)	Q in (Mean Daily) (cfs)	Q out (Mean Daily) 3 3 (10 m /day)	Q out (Mean Daily) (cfs)	Stations
Sampled	(ft, msl)	(m)					Profiled Weather
9/3	858.4	60.5	947	387	350	143	1,2,3,9,15 Clear, calm.
9/17	860.2	61.0	819	335	390	159	1,2,3,9,15 Overcast, calm.

2. LAKE DATA SUMMARY

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
9/03	1620	1	6.0	10.5	129	1.6	N/A	N/A	55	2.6	
			12	9.6	122				35	13	
			24	7.6	126				33	12	
	1510	2	4.0	10.6	125	1.5	N/A	N/A	23	6.1	
			24	7.7	112				35	15	
			40	6.0	127				13.2	4.7	
	1730	3	0.0	12.5	138	1.6	N/A	N/A	22	4.2	
			20	8.2	126				16.0	8.5	
			44	5.5	155				7.6	3.4	
		9	4.0	10.5	114	1.4	N/A	N/A	22	3.2	
			20	8.3	114				50	21	
			44	5.8	139				13.1	1.9	
	1100	15	4.0	10.1	113	1.4	N/A	N/A	25	3.4	
9/17	1730	1	1.0	9.0	138	1.4	2.24	2.1	14.5	7.1	
	1630	2	2	10.4	130	1.5	1.57	2.9	16.0	3.4	
			10	9.8	124				17.5	3.2	
			20	8.1	129				25	8.1	
			40	6.1	148				10.5	2.9	
	1500	3	1	10.4	127	1.5	1.60	2.9	15.5	3.1	
			10	10.0	121				17.0	1.9	
			28	6.7	135				17.8	3.1	
			40	5.9	144				9.5	3.0	
	1245	9	6.0	10.1	126	1.7	1.64	2.79	23	2.0	
			20	8.2	122				29	3.6	
			56	5.2	151				18	2.0	
	1000	15	6.0	10.0	121	1.6	1.54	2.97	30	1.6	

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MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

3. INFLOW/OUTFLOW DATA

MON1H: September, 1984

<u>Date</u>	<u>Time AST</u>	<u>Site</u>	<u>Gage Height (ft)</u>	<u>Instant. Q (cfs)</u>	<u>Mean Daily Q (cfs)</u>	<u>Water Temp. (°C)</u>	<u>Conductivity @ 25°C (umho/cm)</u>	<u>Secchi Disk (ft)</u>	<u>Turbidity (NTU)</u>	<u>TSS (mg/l)</u>	<u>Remarks</u>
9/1	1100	EF	2.65	137	140	4.2	104	1.4	7.0	7.4	
	1145	GF	3.41	186	194	1.1	40	0.4	120	203	
	1500	TR	N/A	N/A	147	9.1	92	1.1	36	11	
9/4	1315	EF	2.61	96	102	5.5	105	1.4	9.0	4.6	
	1420	GF	3.30	161	161	1.4	29	0.5	85	87	
	2055	TR	N/A	N/A	149	9.5	102	1.1	32	2.8	
9/6	1030	EF	2.59	120	131	3.9	104	1.4	10.5	5.4	
	1115	GF	3.19	138	146	1.5	46	0.6	95	107	
	1330	TR	N/A	N/A	141	9.5	116	1.4	25	9.3	
9/11	1010	EF	2.58	117	125	3.8	104	1.4	10.6	0.8	
	1050	GF	3.02	108	123	1.1°C	43	0.5	90	102	
	1314	TR	N/A	N/A	161	9.1	111	1.4	24	4.4	
9/14	1023	EF	2.69	149	187	4.7	104	1.4	17.5	16	
	1106	GF	3.29	159	199	1.1	35	0.4	57	183	
	1310	TR	N/A	N/A	141	9.9	116	1.7	19.7	4.5	
9/18	1030	EF	2.56	112	112	4.5	112	1.4	11.5	4.4	
	1117	GF	3.13	127	129	1.4	48	0.5	127	126	
	1300	TR	N/A	N/A	159	9.1	113	1.6	24	5.6	
9/21	1045	EF	2.47	92	92	2.7	108	1.4	2.9	3.8	GH & Mean Daily Q est for EF.
	1120	GF	2.82	79	79	0.7	70	0.5	100	72	
	1310	TR	N/A	N/A	169	8.9	98	1.6	13.4	5.2	
9/25	1100	EF	2.42	81	83	4.6	131	1.4	2.2	1.7	GH & Mean Daily Q est for EF
	1130	GF	2.70	65	69	1.6	54	0.8	49	45	
	1345	TR	N/A	N/A	168	8.9	129	1.7	13.3	2.5	
9/28	1115	EF	2.40	78	83	4.3	N/A	1.3	1.95	1.1	
	1145	GF	2.61	56	62	1.3	52	N/A	31	36	
	1310	TR	N/A	N/A	150	8.1	112	2.0	12.0	5.0	

NOTE: Abbreviations used: N/A = Not Available, EF = East fork, GF = Glacier Fork, TR = Tailrace, TSS = total Suspended Solids.
Chem/Geo = Chemical & Geological Laboratories of Alaska, Inc., d/s = Downstream, LB = Left Bank, RB = Right Bank.

LIBRARY

M14/56

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: October, 1984

1. LAKE DATA - GENERAL

Date	Lake Elevation	Lake Depth	Q in (Mean Daily) 3 3	Q in (Mean Daily)	Q out (Mean Daily) 3 3	Q out (Mean Daily)	Stations	Weather	
Sampled	(ft,msl)	(m)	(10 m /day)	(cfs)	(10 m /day)	(cfs)	Profiled		
10/01	861.9	61.5	1350	552	459	187	1,2,3,9,15	Calm in a.m. Wind picking up to 18 mph in p.m. intermittent rain.	Light extinction measurement and turbidity profile were not run at Sta. 15 because of darkness.
10/15	862.7	61.8	349	143	401	164	1,2,3,9,15	Cloudy, cold mostly calm.	Turbidity profile not run; pump not functioning.
10/29	862.4	61.7	216	88	912	373	1,2,3,9,15	Clear, calm, cold.	Turbidity profile was not run because of a pump malfunction.

2. LAKE DATA SUMMARY

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
10/01	1130	1	2.0	4.0	132	0.6	13.1	0.3	220	95	
	1330	2	4.0	8.7	131	2.2	1.30	3.4	13.0	3.7	
			20	8.2	132				18.2	1.1	
			46	6.3	147				18	4.8	
	1515	3	4.0	8.8	125	2.3	1.24	3.5	12	1.6	
			16	8.4	123				16	3.1	
			28	7.4	131				16	1.7	
	1730	9	4.0	8.8	135	2.3	1.30	3.4	19	2.9	
			24	7.6	143				15	2.0	
			48	5.7	157				26	14	
			56	6.3	154				75	39	
	1930	15	4.0	8.8	143	N/A	N/A	N/A	11.3	4.6	Too dark for light extinction and secchi measurements.
10/15	1130	1	1.0	1.3	161	3.9	1.00	4.6	6.5	0.86	
	1210	2	4.0	7.3	129	2.6	1.19	3.6	11.2	1.5	
			12	7.3	118				11.2	0.22	
			24	7.2	122				11.2	0.46	
			44	6.2	134				17.8	3.9	

SUMMARY

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: October, 1984

2. LAKE DATA SUMMARY (continued)

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
10/15	0940	3	1.0	7.3	121	2.5	1.27	3.6	11.6	0.96	
			6.0	7.3	94				11.8	0.41	
			16	7.3	111				12.6	0.27	
			36	6.3	134				17.2	4.0	
			2	7.4	120				11.4	2.6	
	1420	9	10	7.4	119	2.7	1.21	3.7	11.7	1.5	
			20	7.4	120				12.4	2.0	
			40	6.3	130				18.4	5.9	
			56	5.8	132				21	8.3	
			2	7.2	122				10.6	0.33	
	1550	15	12	7.2	121				11.1	1.8	
			1	4.7	123	2.5	1.42	3.2	8.4	5.1	
	1300	2	4	6.0	120				11.0	6.4	
			12	5.9	96				10.9	6.5	
			28	5.9	101				11.3	6.0	
			40	5.9	107				11.2	5.4	
	1100	3	4	5.8	129	2.1	1.34	3.2	11.0	4.3	
			16	5.8	102				11.0	5.7	
			32	5.7	112				10.8	5.5	
			44	5.6	117				10.9	5.7	
			6	5.8	127	2.1	1.36	3.3	11.3	6.6	
	1600	9	20	5.9	110				11.5	4.6	
			36	5.9	111				11.0	5.3	
			56	5.9	114				11.2	6.1	
			2	5.2	128	2.6	2.04	2.3	10.2	5.4	
	1700	15	12	5.3	120				11.0	6.7	

3. INFLOW/OUTFLOW DATA

Date	Time AST	Site	Gage Height (ft)	Instant. Q (cfs)	Mean Daily Q (cfs)	Water Temp. (°C)	Conductivity @ 25°C(umho/cm)	Secchi Disk (ft)	Turbidity (NTU)	TSS (mg/l)	Remarks
10/2	1330	EF	2.75	168	183	4.9	106	1.3	30	35	Secchi at EF indicates clear view to bottom at a deep scour area d/s of gage. Q inst at EF is from a discharge measurement.
	1430	GF	3.23	146	144	1.7	77	0.3	338	190	
	1630	TR			177	8.9	115	2.3	10.5	3.2	
10/5	1000	EF	2.57	129	120	3.5	125	3.0	7.4	7.9	
	1200	GF	2.86	85	85	1.7	90	0.3	160	107	
	1620	TR			190	9	119	1.8	12.0	3.5	

" " indicates that the secchi disc was visible to the bottom.

OCTOBER 1984

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

3. INFLOW/OUTFLOW DATA (Continued)

MONTH: October, 1984

Date	Time AST	Site	Gage Height (ft)	Instant. Q (cfs)	Mean Daily Q (cfs)	Water Temp. (°C)	Conductivity @ 25°C (umho/cm)	Secchi Disk (ft)	Turbidity (NTU)	TSS (mg/l)	Remarks
10/9	1215	EF	2.54	107	103	3.3	130	➤3.0	3.2	3.3	
	1300	GF	2.59	54	54	1.3	85	0.5	95	78	
	1450	TR			155	8.0	115	2.1	15.5	6.0	
10/12	1250	EF	2.44	85	85	2.9	128	➤3.0	2.1	1.1	Q inst at GF is from a discharge measurement.
	1030	GF	2.42	40	38	0.5	89	0.7	63	41	
	1530	TR			155	8.0	105	2.1	8.6	2.4	
10/16	1030	EF	2.37	72	71	1.3	142	➤3.0	1.6	0.15	Stilling well frozen at GF from this date on Q estimated for GF.
	1115	GF	N/A	28	28	0.3	84	0.9	54	16	
	1400	TR			159	7.4	117	2.7	11.4	0.56	
10/19	1130	EF	2.33	66	66	2.2	142	➤3.0	1.1	2.1	
	1200	GF	N/A	25	24	0.0	85	0.4	50	40	
	1400	TR			209	7.1	111	2.6	10.5	6.9	
10/23	1130	EF	2.38	74	74	2.2	145	➤3.0	1.6	1.1	Q inst at GF is from a discharge measurement. Q MD for GF is estimated.
	1330	GF	N/A	25	28	0.7	95	1.0	45	30	
	0900	TR			309	6.9	113	2.7	11.3	4.4	
10/26	1030	EF	2.26	55	55	N/A	152	➤3.0	0.9	1.8	Q inst at EF is from a discharge measurement. QMD and Q inst estimated for GF.
	1250	GF	N/A	24	25	0.0	102	1.0	50	23	
	1440	TR			349	6.2	123	2.3	11.5	3.4	
10/30	1217	EF	2.18	45	45	1.7	151	➤3.0	1.3	4.1	GH estimated for EF, water surface is below orifice in stilling well. Q inst & QMD estimated for GF.
	1317	GF	N/A	20	20	0.0	109	1.0	47	14	
	1440	TR			356	5.7	128	2.3	12.2	4.0	

" " indicates that the secchi disc was visible to the bottom.

OCTOBER 1984

M14/87

MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

Month: November, 1984

1. LAKE DATA - GENERAL

Date	Lake Elevation	Lake Depth	Q in (Mean Daily) 3 3 (10 m /day)	Q in (Mean Daily) (cfs)	Q out (Mean Daily) 3 3 (10 m /day)	Q out (Mean Daily) (cfs)	Stations	Weather
<u>Sampled</u>	<u>(ft.msl)</u>	<u>(m)</u>	<u>(10 m /day)</u>	<u>(cfs)</u>	<u>(10 m /day)</u>	<u>(cfs)</u>	<u>Profiled</u>	<u>Weather</u>
11/12	859.6	61.0	159*	65*	868	355	1,2,3,9,15	-10°F, foggy calm.
11/26	859.0	60.8	159*	65*	783	320	1,2,3,9,15	5°F, clear light breeze variable.

2. LAKE DATA SUMMARY

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
11/12	1000	1	1	3.8	117	2.6	1.32	3.5	11.0	4.2	Cond from field YSI
	1130	2	4 16 28 40	4.6 4.6 4.6 4.6	112 126 126 127	2.7	1.25	3.6	11.3 11.0 10.0 9.4	3.4 3.3 N/A 3.1	
	1300	3	4 16 28 40	4.4 4.5 4.4 4.3	110 115 117 116	2.6	1.21	3.7	8.4 9.6 9.6 9.7	2.5 5.4 N/A 2.4	
	1500	9	4 16 32 48	4.6 4.6 4.6 4.6	133 121 124 126	2.8	1.19	3.8	10.6 10.8 11.0 9.8	3.3 3.2 N/A 3.0	
	1630	15	1 12	3.8 3.9	141 128	2.6	1.17	3.8	10.8 10.4	2.4 N/A	
11/26	0930	1	1	2.6	122	2.7	1.07	4.23	9.0	3.3	
	1120	2	4 12 40	3.6 3.7 3.7	117 113 114	3.0	1.24	3.9	8.8 9.6 8.6	3.0 3.4 3.3	
	1220	3	4 20 40	3.0 3.2 3.4	120 117 117	3.0	1.01	4.5	8.2 7.9 8.4	3.8 3.6 3.4	

* Estimate

NOTE: Abbreviations used - N/A = Not Available, EF = East Fork, GF = Glacier Fork, TR = Tailrace, TSS = Total Suspended Solids.

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MONTHLY SUMMARY OF FIELD OBSERVATIONS - EKLUTNA LAKE

2. LAKE DATA SUMMARY

Month: November, 1984

Date	Time AST	Station	Depth (m)	Temp. °C	Cond. (@ 25°C) (umho/cm)	Secchi Disk at surface (ft)	Quantum Extinction Coefficient (/m)	Depth for 99% Extinction (m)	Turbidity (NTU)	TSS (mg/l)	Remarks
11/26	1330	9	2	2.2	127	3.0	1.06	4.2	8.8	3.2	
			16	3.6	125				9.2	3.9	
			32	3.6	125				9.0	5.0	
			52	3.6	127				8.2	4.0	
	1440	15	10	3.3	130	3.0	1.16	3.8	9.2	4.7	

3. INFLOW/OUTFLOW DATA

Date	Time AST	Site	Gage Height (ft)	Instant. Q (cfs)	Mean Daily Q (cfs)	Water Temp. (°C)	Conductivity @ 25°C (umho/cm)	Secchi Disk (ft)	Turbidity (NTU)	TSS (mg/l)	Remarks
11/2	1315	EF	2.11	37	37*	0.9	149	> 3	0.8	0.61	EF GH from levels. GF has ice dam d/s of gage and water over, inbetween, and below ice.
	1230	GF	N/A	18*	18*	0.0	N/A	1.0*	N/A	N/A	
	1550	TR			355	5.5	122	2.4	10.2	7.6	
11/6	1300	EF	2.17	44	44*	2.1	142	> 3	0.74	0.38	EF GH from levels.
	1230	GF	N/A	15*	15*	0.0	102	1.0	41	27	
	1450	TR			332	5.4	113	2.5	9.8	5.3	
11/9	1220	EF	N/A	35*	35*	0.1	146	> 3	0.85	0.30	
	1130	GF	N/A	N/A	10*	0.0	103	1.0	40	19	
	1400	TR			343	5.0	139	2.8	10.2	3.2	
11/13	1330	EF	N/A	27*	25*	-0.1	168	> 3	0.98	1.7	Ice damming, anchor ice, Shelf ice at EF.
	1430	GF	N/A	N/A	10*	-0.2	114	1.0*	36	24	
	1550	TR			355	4.3	128	2.6	8.5	7.5	
11/16	1200	EF	N/A	27*	25*	1.0	156	> 3	0.85	0.60	
	1230	GF	N/A	N/A	10*	-0.1	112	1.0	35	17	
	1340	TR			362	4.0	125	2.7	9.5	4.2	
11/23	1500	TR			292	3.8	127	2.6	6.6	2.3	
11/30	1400	TR			357	N/A	129	2.6	6.7	2.2	

* Estimate

NOTE: Abbreviations used - N/A = Not Available, EF = East Fork, GF = Glacier Fork, TR = Tailrace, TSS = Total Suspended Solids.