

Public-data File 84-46

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS PLACER MINING STUDY

By

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Alaska Division of
Geological and Geophysical Surveys

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DGGS Placer Mining Study
Turbidity and Settleable Solids Data to 9/6/84

<u>SAMPLE LOCALITY</u>	<u>DATE</u>	<u>TIME (Hrs)</u>	<u>NTU</u>	<u>SETTLEABLE SOLIDS *</u>
<u>Birch Creek Drainage</u>				
Crooked Creek (bridge in Central)	7/26/84	1645	395	
	7/27/84	1540	425	
	7/28/84	1707	155	
	7/29/84	0900	210	
	7/30/84	0900	230	
	7/31/84	1630	265	
	8/2/84	1750	690	
	8/3/84	1508	925	
	8/6/84	1645	295	
	8/9/84	1118	975	
	8/9/84	1600	213	
	8/10/84	1635	900	
	8/11/84	1415	900	
	8/12/84	1600	883	
	8/13/84	1600	950	
	8/13/84	1645	900	
	8/14/84	1650	838	
	8/20/84	1600	1050	
	8/21/84	1655	1075	
	8/21/84	1848	1150	
	8/22/84	1900	1200	
	8/23/84	1640	1550	
	8/28/84	1655	850	
	8/30/84	1300	488	n.d.
	9/5/84	1500	700	n.d.
	9/6/84	1319	800	
(ISCO sample at bridge in Central	8/7/84	0915	1375	
	8/7/84	1215	1100	
	8/7/84	1515	1775	
	8/7/84	1815	2025	
	8/7/84	2115	1100	
	8/8/84	2415	925	
	8/8/84	0315	425	
	8/8/84	0615	1650	
	8/8/84	0915	1025	
	8/8/84	1215	1250	
	8/8/84	1515	1475	
	8/8/84	1815	1675	
	8/8/84	2115	1525	
	8/9/84	2415	1400	
	8/9/84	0315	1575	
	8/9/84	0615	1550	
	8/9/84	0915	1575	
	8/9/84	1215	1275	
	8/9/84	1500	1425	

SAMPLE LOCALITY	DATE	TIME (HRS)	NTU	SETTLEABLE SOLIDS *
(ISCO sample at bridge in Central)	8/21/84	0900	1400	
	8/21/84	1200	1275	
	8/21/84	1500	888	
	8/21/84	1800	1150	
	8/21/84	2100	1075	
	8/22/84	2400	1125	
	8/22/84	0300	1275	
	8/22/84	0600	1475	
	8/22/84	0900	1425	
	8/22/84	1200	1000	
	8/22/84	1500	1150	
	8/22/84	1800	1250	
	8/22/84	2100	988	
	8/23/84	2400	1350	
	8/23/84	0300	1550	
	8/23/84	0600	1600	
	8/23/84	0900	1725	
	8/23/84	1200	1200	
	8/23/84	1500	1538	
	8/23/84	1800	1275	
	8/23/84	2100	1150	
	8/24/84	2400	1100	
	8/24/84	0300	1400	
	8/24/84	0600	1338	
8/24/84	0805	2075		
Ketchem Creek (at camp)	7/26/84	1640	140	
	8/1/84	1940	210	
	8/2/84	1802	6500	2.5ml./l.
	8/3/84	1539	2900	
	8/7/84	1435	5500	
	8/8/84	0910	135	
	8/8/84	2125	6200	
	8/9/84	0910	255	
	8/13/84	1617	46	
	8/21/84	1952	6600	
	8/22/84	1915	5500	
	8/23/84	1820	3950	
	8/27/84	1721	3250	0.9ml./l.
	8/28/84	1935	3450	
	8/29/84	1921	140	
	8/30/84	1440	76	
	9/5/84	1640	185	0.7ml./l.
9/6/84	1304	69		
(above mining)	8/29/84		1	n.d.

SAMPLE LOCALITY	DATE	TIME (HRS)	NTU	SETTLEABLE SOLIDS
Deadwood Creek (at H.S.R. bridge)	7/24/84		1400	0.75ml./l.
	7/26/84	1650	1600	
	8/1/84	1930	1250	
	8/2/84	1749	90	
	8/3/84	1522	155	
	8/8/84	0915	400	
	8/8/84	2020	2450	
	8/9/84	1010	2550	
	8/13/84	1609	2300	
	8/21/84	1945	863	
	8/22/84	1908	1050	
	8/23/84	1810	1250	
	8/27/84	1714	1775	
	8/28/84	1929	3000	
	8/29/84	1916	2175	
	8/30/84	1431	320	
	9/5/84	1545	213	n.d.
9/6/84	1310	85		
9/12/84	1230		1.3ml./l.	
(above mining)	7/24/84		2	n.d.
Boulder Creek (at bridge)	7/25/84		1	
	7/26/84	1212	4.6	n.d.
(above Arctic Mining after rain)	7/25/84		33	n.d.
Bedrock Creek (at camp)	7/25/84		1	n.d.
	7/26/84		1.9	
	8/13/84	1500	3	
	8/21/84	1912	1	
	8/22/84	1844	1	
	8/23/84	1710	0.5	
Mammoth Creek (at Steese Hwy Bridge)	7/26/84	1530	250	
	8/1/84		1200	1.1ml./l.
	8/2/84		1625	2.6ml./l.
	8/3/84	1604	1075	
	8/7/84	1321	670	
	8/8/84	1206	425	0.01ml./l.
	9/9/84	1215	580	
	8/13/84	1530	1150	
	8/22/84	1838	660	
	8/23/84	1700	520	
	8/27/84	1631	159	
	8/28/84	1905	136	
	8/29/84	1851	112	
	8/30/84	1622	122	
	9/5/84	1230	700	1.10ml./l.
	9/6/84	1340	760	

SAMPLE LOCALITY	DATE	TIME (HRS)	NTU	SETTLABLE SOLIDS
(ISCO sample at Steese Hwy bridge)	8/7/84	1015	975	
	8/7/84	1315	1400	
	8/7/84	1615	1200	
	8/7/84	1915	1375	
	8/7/84	2215	1225	
	8/8/84	0115	1675	
	8/8/84	1230	1625	
(ISCO sample at Steese Hwy bridge)	8/21/84	0935	106	
	8/21/84	1235	90	
	8/21/84	1535	450	
	8/21/84	1835	230	
	8/21/84	1921	240	
	8/21/84	2135	270	
	8/22/84	2435	350	
	8/22/84	0335	56	
	8/22/84	0635	24	
	8/22/84	0935	320	
	8/22/84	1235	400	
	8/22/84	1535	365	
	8/22/84	1835	590	
	8/22/84	2135	293	
	8/23/84	2435	285	
	8/23/84	0335	50	
	8/23/84	0635	24	
	8/23/84	0935	380	
	8/23/84	1235	555	
	8/23/84	1535	440	
	8/23/84	1835	590	
	8/23/84	2135	140	
	8/24/84	2435	655	
	8/24/84	0335	148	
8/24/84	0635	88		
8/24/84	0840	340		
(at Harrison Creek Road bridge)	8/2/84	1202	245	
	8/9/84	1230	180	
Miller Creek (lower)	7/31/84	1730	19	
	8/2/84		17	n.d.
(upper)	7/31/84	1000	0.6	
	8/2/84		0	n.d.
Mastodon Creek (lower)	8/1/84	1300	1375	n.d.
	8/2/84		365	
(upper)	8/1/84	1100	2.4	
	8/2/84		4.6	n.d.

SAMPLE LOCALITY	DATE	TIME (HRS)	NTU	SETTLABLE SOLIDS
Independence Creek (below Russell) (above Russell)	8/2/84		3.4	n.d.
	8/1/84		1.1	n.d.
Porcupine Creek (at road)	7/26/84		850	1.75ml./l.
	7/26/84	1215	1400	2.9ml./l.
	8/3/84	1157	10	
	8/7/84	1630	14	
	8/30/84	1110	41	
	9/6/84	1220	77	
	8/3/84	1645	1725	
(above Haskins)	8/3/84		15	
(above mining)	8/8/84	1515	55	n.d.
	8/8/84	1815	0	n.d.
Bonanza Creek (at road)	8/3/84	1225	550	
	8/7/84	1600	2800	5.2ml./l.
	8/30/84	1113	335	
	9/6/84	1225	29	
(above mining)	8/7/84	1230	1	
	8/7/84	1800	0	n.d.
Twelvemile Creek (below Reed Cr.)	8/28/84		0	n.d.
(above N.F. Birch Creek)	8/14/84		0	
	8/14/84		0	
	8/28/84		0	n.d.
Birch Creek (North Fork)	8/15/84	1315	0.5	
	8/28/84		0	n.d.
Bear Creek	8/15/84	1635	0	
	8/29/84	1530	1	n.d.
Fish Creek	8/22/84	1425	1	
	8/29/84	1730	1	n.d.
Ptarmigan Creek (at bridge)	8/22/84	1800	2	
	8/30/84		1	n.d.
<u>Tolovana River Drainage</u>				
Tolovana River (collected by R. Rybachek above mining)	8/12/84	1630	1.5	
	8/14/84	1030	2	
	8/15/84	1000	2	
	8/16/84	1200	2	
	8/17/84	1200	2	
	8/18/84	1030	2	
	8/19/84	1130	2	
	8/20/84	1830	5.5	
	8/21/84	1230	16	
	8/22/84	1145	17	
	8/23/84	1030	9	

SAMPLE LOCALITY	DATE	TIME (HRS)	NTU	SETTLABLE SOLIDS
	8/24/84	1400	5	
	8/25/84	1130	3.5	
	8/26/84	1130	89	
	8/27/84	1415	37	
	8/28/84	1300	20	
	8/30/84	1100	6	
Chatanika River (11 mi. Elliott)	7/27/84	1723	21.5	
	7/28/84	1530	9.5	
	7/29/84	2030	16	
	8/3/84	1950	3.1	
	8/5/84	1615	4.1	
	8/6/84	1705	4.1	
	8/10/84	2001	3	
	8/13/84	2030	4	
	8/19/84	1540	4.5	
	8/24/84	2015	2	
	8/26/84	1655	5	
	8/31/84	1615	10	
	9/8/84	1650	11	
(11.5 mi. Elliott)	9/7/84	1445	15	
(12 mi. Elliott)	9/2/84		10	
	9/3/84		9.5	
	9/9/84	1415	6	
(39 mi. Steese)	7/27/84	2022	7	
	7/28/84	1946	5	
	7/30/84	1640	5.3	
	8/3/84	1900	17	
	8/3/84		10	
	8/4/84	1930	21	
	8/6/84	1950	7	
	8/9/84	1530	28	
	8/10/84	1730	54	
	8/11/84	1900	35	
	8/13/84	1910	5	
	8/16/84	1940	27	
	8/19/84	1450	6	
	8/24/84	1750	6.5	
	8/25/84	1530	41	
	8/30/84	1445	62	
	8/30/84	1835	50	
	8/30/84	1945	60	
	8/31/84	1835	46	
	9/1/84		21	
	9/2/84		36	
	9/7/84	1300	8	
	9/8/84	1540	6	
	9/9/84	1415	14	

<u>SAMPLE LOCALITY</u>	<u>DATE</u>	<u>TIME (HRS)</u>	<u>NTU</u>	<u>SETTLEABLE SOLIDS</u>
Faith Creek	8/9/84	1415	42	
McManus Creek	8/9/84	1415	0	
<u>Chena River Drainage</u>				
Chena River (40 mi. CHSR)	7/26/84		2.7	
	7/28/84		1.0	
	7/29/84		0.7	
	7/30/84		1.5	
	7/31/84		0.3	
	8/1/84		0.7	
	8/4/84		0.8	
	8/5/84		0.8	
	8/7/84		0.6	
	8/11/84		1.0	
	8/12/84		1.0	
	8/13/84		1.0	
	8/14/84		1.0	
	8/19/84		0.5	
	8/20/84		1.0	
<u>Salcha River Drainage</u>				
Salcha River (at Salch River WS)	7/28/84	1740	8.0	
	7/29/84	1320	6.1	
	7/29/84	2010	2.8	
	7/30/84	1325	1.7	
	7/30/84	2005	1.6	
	8/2/84	1310	0.4	
	8/2/84	1930	2.6	
	8/3/84	1310	1.4	
	8/3/84	2030	1.2	
	8/4/84	1315	1.2	
	8/4/84	2010	1.4	
	8/5/84	1100	1.3	
	8/26/84	1100	1	
	8/26/84	1650	1	
	8/27/84	1115	7	
	8/27/84	1645	6	
	8/28/84	1030	3	
	8/28/84	1645	2	
	8/29/84	1015	2	
	8/29/84	1700	2	
	9/1/84	1430	3	
	9/1/84	1600	1	
	9/2/84	1030	1	
	9/2/84	1700	1	
	9/3/84	1015	1	
	9/3/84	1730	1	
	9/4/84	1030	1	
	9/4/84	1700	1	
	9/5/84	1030	1	
	9/5/84	1715	1	

<u>SAMPLE LOCALITY</u>	<u>DATE</u>	<u>TIME (HRS)</u>	<u>NTU</u>	<u>SETTLABLE SOLIDS</u>
<u>Koyukuk River Drainage</u>				
Koyukuk River (Middle Fork)	7/9/84	1759	53.5	
Smith Creek	7/10/84	1020	1125	
Linda Creek	7/9/84		160	
Gold Creek	7/9/84		1300	

* n.d. means not measureable using an Imhoff cone for 45 minutes; or not done if stream was clear

DCCS Placer Mining Study
 Sites Sampled for Total Water Quality Determinations
 (With Preliminary Data)

For each site we sampled for major anions, major cations, dissolved trace metals, total recoverable trace metals, total solids; and measured pH, temperature, alkalinity, specific conductance, turbidity, settleable solids, and discharge (unless noted).

Site	Date	Remarks	Temp °C	pH	Alka	Spec. Cond. (umho)	NTU	Settleable Solids (ml./l.)	Discharge (CSF)
Bear Creek	8/29/84	above bridge	2	6.87		46	1	n.d.	12.1
Bedrock Creek	7/25/84	at camp	6	5.78		25	1	n.d.	2.6
Birch Creek (North Fork)	8/28/84	below bridge	0.5	6.55		78	0	n.d.	24.8
Bonanza Creek	8/7/84	below mining	15	6.38		100	2800	5.2	9.49
Bonanza Creek (upper)	8/7/84	above mining	10	6.20		85	0	n.d.	6.30
Boulder Creek	7/25/84	above Arctic Mining after rain	5	7.45		102	33	n.d.	13.3
Boulder Creek	7/25/84	at bridge	7	6.88		71	1	n.d.	(USGS)
Crooked Creek	8/30/84	above bridge, Central	5	6.90		86		n.d.	59
Deadwood Creek	7/24/84	above mining; no alkalinity nor pH	9			193	2	n.d.	7.8
Deadwood Creek	7/24/84	at bridge	15	5.89		181	1400	0.75	13.7
Fish Creek	8/29/84	above bridge	2	6.70		72	1	n.d.	6.89
Independence Creek	8/2/84	below Russell	10	5.85		100	3.4	n.d.	5.92
Independence Creek	8/1/84	above Russell	9	7.17		97	1.1	n.d.	6.24
Ketchum Creek	8/27/84	at campground	4	7.40		62	3250	0.9	4.3
Ketchum Creek	8/29/84	above mining	1	7.45		28	1	n.d.	1.5
Mammoth Creek	8/1/84		11	6.94		162	1200	1.1	30.7
Mastodon Creek (lower)	8/2/84		9	7.28		87	365	n.d.	9.33
Mastodon Creek	8/2/84	above mining	6	6.91		68	4.6	n.d.	4.51
Miller Creek (lower)	8/2/84	mouth, left channel	13	5.60		140	17	n.d.	7.98
Miller Creek (upper)	8/2/84		9	6.45		86	0	n.d.	9.07
Porcupine Creek	8/8/84	above mining	10	5.72		80	0	n.d.	2.3
Porcupine Creek	8/8/84	above Bonanza Creek	14	6.32		103	55	n.d.	2.63
Ptarmigan Creek	8/30/84	above bridge	4	7.5		56	1	n.d.	25.0
Twelvemile Creek	8/28/84	below Reed Creek	0.3	7.0		97	0	n.d.	15.4
Twelvemile Creek	8/28/84	above North Fork	0.5	6.58		130	0	n.d.	27.9