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ANNUAL NARRATIVE

Babine-Morice Sub-district

1982

By Terry Turnbull & Denis Burnip

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I. General Description of Subdistrict

The Babine-Morice Subdistrict consists of: the Skeena River watershed above the confluence of the Skeena and Babine Rivers, the Babine River watershed upstream from the Kisgagas Reserve, the Bulkley River watershed upstream from and including Trout Creek, and the Zymoetz River upstream from Mc Donnell Lake. The subdistrict serves the communities at Smithers, Telkwa, Quick, Houston, Topley, Topley Landing, Granisle, Fort Babine and their surrounding rural areas. Total population is approximately 20,000 people.

II. Fisheries

A. Commercial Fisheries

1. Babine River Jack-Sockeye Harvest

Due to the poor returns of jack-sockeye to the upper Babine River (Dave Southgate), there was no commercial harvest during the 1982 sockeye migration.

B. Sport Fisheries

1. Tidal Waters - non-applicable

2. Non-Tidal Waters - sportfish catches for Babine River (BR) and Bulkley-Morice system (B-M) - (see Table 1).

3. Provincial Sport-Fishing Licences - sold in area (see Table 2).

4. Sport Fishery Closures

   a. New regulations for 1982

      No new ones in 1982, see 1981 Annual Narrative for up todate closures.

   b. Public Notices in 1982 - none in 1982

5. Gear and other Restrictions

   a. Roe Ban - Morice Lake, Bulkley River

   b. Single Hook - Bulkley River

   * No new restrictions in 1982.

TABLE 1

		Spring	Jack-Spring	Coho	Steelhead
1982	(B-M)	55	25	140	-
	(BR)	50	-	UNK	-
	TOTAL	105	25	140	-

* Steelhead figures not available until summer.

1981	(B-M)	70	30	245	-
	(BR)	10	-	35	-
	TOTAL	80	30	280	-
1980	(B-M)	150	80	835	5,125
	(BR)	20	-	100	2,700
	TOTAL	170	80	935	7,825
1979	(B-M)	78	70	260	94
	(BR)	12	-	63	84
	TOTAL	90	70	323	178

TABLE 2

YEAR	NON-RESIDENT	CANADIAN RESIDENT	SHORT TERM	CANADIAN RES.STEELHEAD	NON-RES. STEELHEAD	Ca: Sr
1982	474	3,660	349	1,047	386	18
1981	673	4,352	240	1,126	412	16
1980	632	4,084	235	1,172	395	16
1979	595	3,750	234	1,007	389	12
1978	384	2,361	231	2,360	299	26
1977	365	1,663	240	573	212	5

B. Sport Fisheries (continued)

6. Sport Fishing Conditions

a. Springs: 1982 was an unproductive year for the spring salmon angler on the Bulkley-Morice system above Moricetown. The fishing site which produced the best catch was the Bulkley-Morice confluence. Fishing pressure on all chinook stock escapement is very intense and needs intensive management if the stocks are going to increase to historical levels.

b. Coho: Coho fishing in the subdistrict was on the whole, extremely poor. The traditional sites in the Bulkley-Morice system produced very little fish even though the fishing pressure was intense. The success rate did improve after October 1st, 1982 when the Upper Morice River opened to angling. Babine River coho fishing was below average, however for some unknown reason, fishing pressure was down. Best producing water was the 3-4 km stretch below the Babine River bridge.

c. Steelhead: The Fish and Wildlife Branch completed an extensive creel census on the Bulkley-Morice, which will not be available until the spring of 1983.

C. Indian Food Fishing

1. Babine-system Food Fishing

BABINE LAKE CATCH FIGURES*

YEAR	SOCKEYE	COHO	PINK	SPRING	ST'HD	TOTAL
1982	42,000	UK	UK	UK	UK	42,000
1981	30,300	UK	UK	21	UK	30,321
1980	22,635	125	200	20	0	22,980
1979	21,500	75	120	0	0	21,695
1978	10,920	15	152	3	1	11,091
1977	10,777	50	100	20	10	10,957
1976	11,095	UK	13	15	0	11,109

* Figures include catches from Sutherland River, Pendleton Bay, Topley Landing, Old Fort, Smithers Landing, Fort Babine & Nilkitlwa Lake.

Indian Food Fishery 1982, Smither Sub-District

Due to the increasingly hard economic times, more and more fish are being taken every year; this year was no exception. The large return of this years sockeye run boosted catch success in the food fishery. In some instances nets were set for up to 4 weeks.

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2. Bear Lake Food Fishery

Three Takla Lake families were issued I.F.F. Licences to fish Bear Lake. They fished during August finishing in early Septmeber, catching an estimated 900 - 1000 sockeye and 150 - 200 springs. The Takla Lake Band population is 367.

C. Obstructions & Diversions

Beaver dams were removed on Kathlyn Creek during coho migration. The dams had to be removed anywhere from 1-2 times per week. Beaver dams on Toboggan Creek & Morrison Creek were passable & did not require maintenance.

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VII TRENDS IN THE FISHING INDUSTRY

A. Food Fishing

1. Bear Lake Food Fishing

The most traditional of food fisheries within the Subdistrict. As long as the Bear Lake Sockeye run has low escapement, fishing pressure will continue to shift to Bear River chinook stocks.

The chinook are being caught by some and then backpacked over 3 km to camp. Due to budget restraints in 1982, the Bear Lake chinook stocks could not be assessed (as requested in 1981 narrative) for a harvestable surplus. If, during the 1983 escapement it is found that there is no available surplus of Bear River chinooks, then regardless of fishermen notification, court action will undoubtedly be necessary for observance of the closure. (Bear River is closed to the taking of chinooks for conservation) Subdistrict staff request direction as to whether this illegal chinook fishery should continue or be stopped.

B. Sport Fishery

Some anglers complained about jet boat traffic while they worked their favorite fishing hole at 06:00 in the morning. Anglers are likely to seek a river boat ban some time in the future on the Bulkley-Morice system.

XI ADMINISTRATION

A. Staff

1. Fishery Officers: T. Turnbull GT-3
   D. Meyers - Retired/82
   D. Burnip GT-2

2. Wardens: A. Klopfenstein (May 4 - Dec.4)

3. Guardians: H. Blodgett - Bulkley-Morice (June 15 - Oct.31)

4. Trainee: Nil

5. Recommendations

The Subdistrict shorthanded this year. Guardians are needed for the Fort Babine and Bear Lake areas to monitor the food fishery accurately, to obtain spawning escapements, to remove stream obstructions, to patrol the sport fishery and to observe forestry and highway work.

XII EQUIPMENT

A. Vehicles

1980 Dodge P/U truck
1981 Ford Bronco

B. Boats

One inboard launch (Legace Bay), One river boat, and One outboard lake boat.

C. Boat Trailer - One

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D. Outboard Motors

1. Mercury 50 H.P. (2) with jets
2. Mercury 40 H.P. (1)
3. Mercury 20 H.P. (1)
4. Johnson 10 H.P. (2)
5. Johnson 5.5 H.P. (1)

E. Chain Saws - Three

F. Long Guns

30-06 (2)
12 guage (1)

G. Hand Guns - 357 Mag (3)

XIII INFORMATION, EDUCATION & OTHER PROGRAMS

Nothing Specfic

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C. Indian Food Fishery continued

Babine Fence Trap Fishery

The object of the trap fishery was to provide Elders of the Lake Babine band with fish. For those Elders, the setting of nets and the processing of the fish has become too great a task. In this fishery 3,337 sockeye were taken and distributed among 19 Elders. This gives an average of 175 sockeye per Elder.

There are certain advantages and disadvantages to this fishery:

Advantages:-fish are taken when abundant
-no undesired species are taken
-exact counts can be maintained
-quotas can be kept

Disadvantages: -arguments arise among band officals regarding the selection of whom is entitled to get fish
-the arrangement of the pick-up date and the number of Elders who are supposed to pick up the fish seems to be difficult to achieve.
-some Indians will try to get into the trap fishery to avoid the work of setting nets themselves.
-some will lose the incentive for the net fishery and will eventually lose the opportunity to pass their skills on to the younger generation.

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III SPAWNING SUMMARY

Salmon escapements to the Babine system are counted through the Babine river counting weir (Dave Southgate 1982.). The fence panels were installed on July 9, 1982 and removed on September 27, 1982. The escapement began on July 11, 1982.

Note:
*sockeye, pink, coho and chinook are qualitative
**Simply unknown because the systems were not flown during 1982.

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A. Tables

1. SOCKEYE

	Babine System	**Upper Skeena	Bulkely-Morice	Upper Copper
1982	1,136,344 (60,217JK)	UNK	3,000	1,000
1981	1,132,734 (155,549JK)	2,522	1,000	1,200
1980	526,059 (233,855JK)	1,950	650	140
1979	1,160,966 (90,498JK)	4,300	1,650	1,100
1978	401,318 (296,274JK)	6,650	600	700

BABINE LAKE SOCKEYE SPAWNERS

1982	1981	1980	1979	1978	1977
417,000	578,134	164,852	241,988	152,643	126,000

2. COHO

	*Babine System	**Upper Skeena	*Bulkley-Morice	*Upper Mori
1982	2,287	N.O.	650	UNK
1981	2,166	N.O.	1,354	150
1980	4,399	N.O.	3,995	N.O.
1979	2,909	500	750	250
1978	11,446	4,875	5,800	1,500

3. PINKS

	*Babine System	**Upper Skeena	Bulkley-Morice
1982	380,348	N.O.	9,000
1981	130,390	N.O.	12,500
1980	326,451	N.O.	100 (?)
1979	63,703	1,500	5,800
1978	192,708	N.O.	812

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A. Tables continued

4. CHINOOK

	Babine System	**Upper Skeena	Bulkley-Morice
1982	900(317JK)	3,000	3,100
1981	723(146JK)	5,100	3,290
1980	918(242JK)	9,000	5,075
1979	822(404JK)	3,000	4,675
1978	492(1,111JK)	4,050	6,950
1977	619(768JK)	1,800	4,750
1976	618(251JK)	950	1,835
1975	1,018(342JK)	1,500	3,000

B. Summary Comments

1. Sockeye

a. Babine System - This year's sockeye escapement is the 3rd highest count since the installation of the fence in 1946. The adult return is higher than either of its brood years, 1977 & 1978. Conversely, the jack sockeye return is moderate.

20,000 sockeye spawners were airlifted over the natural falls on Pinkut Creek. This is the 7th year an airlift operation has been used to relieve overcrowding in the Channels, although these are not consecutive years.

b. Bulkley-Morice System - Nanika River sockeye escapement increased somewhat compared to the 1971-1980's average of 732.5 fish. This could be contributed to by the excellent visibility and weather conditions during the enumeration flight. The escapements still remain low when compared to the 1950's, when escapements of 35,000 to 60,000 were reported.

c. Upper Copper River - Sockeye were observed on the spawning grounds on September 1, 1982. However, judging by the amount of sockeye carcasses and their general condition, it is safe to say sockeye were on the spawning ground as early as mid-August.

Old reports indicate sockeye ranged past Dennis Lake. Their disappearance from these upper reaches has prompted E.P.S. officials to take water samples in the area of the Old Duthie Silver Mine. Now in operation as the Kindrat Mine. Monitoring of the water quality below the

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mine will be continued in 1983.

d. Upper Skeena System - Unfortunately little or nothing is known about the sockeye escapements in the upper Skeena systems for 1982. The reduced allotment for flying time in the Smithers Sub-district made the enumeration of these systems impossible.

2. Coho

a. Babine System - Based on "fence" counts, the 1982 coho return (2,287) was only slightly less than its brood year (2,909) but still shows a definite decline in the coho stocks over the past few years. Although the Babine fence fish counts produce the most accurate coho counts in the Sub-district, it is simply an assessment of the upper Babine system.

Two of the Babine River's major tributaries, the Nichyeskwa and the Nilkitkwa River are below the fence. Both these rivers have coho, and their stocks may be substantial. With the additon of a guardian for the Babine fence area these counts could be acquired.

b. Bulkley-Morice System - Total coho count was estimated at 650 in the upper Morice River. These estimates were acquired from Dave Bustard, consultant for Envirocan. As a result of these estimates it would be safe to assume that the escapement of coho to the mainstem of the Morice River is substantially more than past estimates.

No quantitative escapement figures were obtained for any of the trubutaries except Toboggon and Kathlyn Creeks. Owen Creek was checked throughout the season but no fish were observed.

Kathlyn Creek escapement figures are, historically, the most accurate; this year's 24 fish is well below the ten year average of approximately 163 fish.

The decreasing coho stocks in Kathlyn Creek are almost assuredly in proportion to increasing residential development and should not be used as a stock indicator for the Bulkley-Morice System.

With future residential development planned for the Kathlyn Creek drainage, it is becoming increasingly evident that our coho stocks are in jeopardy of being eliminated. Stricter restraints on these residential developments must be instigated in order to maintain and increase our coho stocks.

The best gauges of coho abundance to date are the Moricetown food fishery catch, the Trout Creek bar sport fishery and Toboggan Creek escapement.

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In order that this Sub-district coho stocks can be maintained, it is suggested that some small S.E.P. facilities be put in place on some of the small tributaries which now support wild coho stocks.

c. Upper Copper River - Current strength of coho stocks are really unknown.

d. Upper Skeena System - Unless the fisheries personnel in the Smithers Sub-district, by some freak accident gain the ability to fly, the coho escapements will remain unknown for quite some time.

3. Pinks

a. Babine System - The Babine River adult pink salmon return of 380,348 was the highest count since the installation of the fence in 1946.

b. Bulkley-Morice System - Approximately 86% of the Bulkley-Morice pink salmon spawn between Fenten Creek and Gosnell Creek. 80% of that spawning is done in the side channels of the Morice River. Counting pink salmon spawners in this system can only be done accurately by intensive helicopter searching. The 9,000 fish reported is fish found only within the Morice System and does not include the unknown amount in the Bulkley.

Spawning pinks were observed in the Bulkley River downstream as far as Trout Creek, but their quantity was not obtained.

c. Upper Skeena System - See Upper Skeena System coho comments.

4. Chinooks

a. Babine System - The chinook return of 900 is considerably lower than its brood years (targeting on 4 and 5 years) and still remains much lower than the 10 year average.

b. Bulkley-Morice System - The upper Bulkley River chinook return of 100 is considered to be fairly accurate for the mainstem, however, a recent report released by the Provincia Government indicates that the smaller tributaries are utilized by rearing chinooks and possibly spawners as well.

The Morice River chinook return of 3,000 fish is well below the ten year average. 90% of the chinook spawning is believed to occur between Gosnell Creek and Morice Lake.

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c. Upper Skeena System - The Bear River chinook salmon return is the only quantitative count in this system. This year's 3,000 is below the ten year average and is also below the 1975 - 1980 average of 3291.6. The Bear River was flown only once this year on September 15, 1982. The condition of the fish and the amount of carcasses would indicate that the fish were present and spawning near the end of August. It is very possible the run could have been stonger than the 3,000 estimated.

IV. WEATHER AND WATER LEVELS

March 29 - April 4	Some snow is gone, run off during brief afternoon periods.
April 5 - 11	Bulkley still frozen, cold nights control run-off
April 12 - 18	Ice on Bulkley River. Local lakes still frozen.
April 19 - 25	Run off started April 20, still well below summer levels, cold nights controlling thaw.
May 24 - 30	Bulkley approaching flood levels, water level 15 cm below grass line at Eddy Park
May 31	Bulkley River at peak freshet
June 7	Bulkley River down approxmately 30 cm from crest
June 14 - 20	Dropped 60 cm from crest and still muddy
June 21 - 27	Dropped 75 cm from crest and still muddy
June 28 - July 4	River maintaining-flow clearing
July 5 - 11	Water dropping quickly
July 11 - 18	Water has stablized higher than past years and has obtained summer clairity.

MONTH	RAIN (mm)	SNOW (cm)	WATER CONTENT (mm)	TEMPERATURE		
				High	Low	Average
January	---	148.2	106.6	-10.9	-19.5	-15.2
February	---	54.3	43.8	- 4.1	-12.8	- 8.5
March	0.2	8.7	6.9	3.8	- 8.1	- 2.2
April	7.7	5.9	0.4	7.5	- 3.7	1.9
May	22.9	0.4	---	14.6	2.1	8.4
June	27.3	---	---	24.0	7.6	15.8
July	53.8	---	---	22.0	9.6	15.8
August	21.6	---	---	20.5	7.3	13.9
September	45.3	---	---	17.7	5.0	11.4
October	52.8	0.6	0.6	8.9	0.5	4.7
November	1.4	30.4	22.0	- 1.7	- 7.9	- 4.8
December	TR	32.8	25.6	- 5.1	-12.5	- 8.8

V. FRY SALVAGE

a. Bulkley-Morice - Numerous checks were made in all of the old areas which historically have trapped fry, however, this year no fry were found in these areas.

VI. HERRING

Not applicable

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VII. ENVIRONMENTAL, MULTIPLE WATER USE

A. Pollution

1. Equity Silver Mine

a. Mine Access Road - The mining road problems reported in the previous narratives is much improved. The water interception ditch dug on the hillside at 5.5 km works surprisingly well. On the darker side, some acid generation "hot spots" are showing up along the road where waste rock from the mine area was used.

b. Equity Silver Mine Public Meeting, February 25, 1982 in Houston, B.C. - The 108 ton sulphuric acid spill of Novembe 17, 1981 raised several mine safety issues in the minds of local citizens. Some of the issues brought forth were:

-In 1976/77 and 1980 recommendations were made for a spill containment system in the mine yard and for a pumping station below yard. Why were these recommendations ignored?

-Dissolved metal readings have exceeded pollution control permit. Why have charges not been pressed?

-Effects of spill on resident's water systems and property values won't be known until after spring thaw. To what point can the mine be held responsible Although metal levels fluctuated in Goosly Lake, spring thaw did not noticeably effect fish stocks, but the Buck Flats residents distrust of the mine is still frosty.

c. Acid Generation Issue - Shortly after the acid spill, it became apparent that the bacterium *Thiobacillus ferroxidans* was actively responsible for falling PH's in the range of 4, 3, and 2 appeared in some water drainages seeping through the waste rock dump. As the PH dropped excessive levels of free heavy metal ions leached from the rocks and another environmental problem emerged.

The Environmental Protection Service stance on acid generation had been vindicated as the B.C. Research Report so hauntingly predicted. Excerpts from that report of August 29, 1973 explain:

"....The Environmental Protection Service....has requested that the company provide data concerning the potential for acidic drainage water arising from the stock piled material and the waste dumps due to the oxidation of the sulfide minerals they contain.....

The production of sulfuric acid and the solubilization of heavy metals contained in mineralization disturbed during mining operations has become of significant

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environmental concern. Extensive ecological damage has occurred both in the Maritime Provinces and in Ontario from this phenomena and invariably the production of acid mine water or acid drainage waters is associated with the presence of the leaching bacterium *Thiobacillus ferroxidans*.....

.....the three samples examined can theoretically produce from 5 to 12 times as much acid as they will consume.

.....microbiological oxidation of sulfide minerals will only occur in a moist environment where the PH is below approximately 3.5 and where there is oxygen and carbon dioxide available. The sulfide sulfur content and the low acid consumption of the samples examined, suggest that microenvironments favourable for leaching bacteria could develop very readily with this mineralization and that once the leaching bacteria establish a foothold, they could generate sufficient excess sulfuric acid to reduce the PH of surrounding areas within the heap, thus accelerating the acid producing process.....

It is not possible to predict precisely when microbiologica acid production would occur with this mineralization, but past experience suggests that evidence of microbiological oxidation of sulfides would be observable within two years.

.....it is easier to plan, during the preliminary stages of mine development, for the day that acidic mine waters will emerge from the dumps than it is to try and institute corrective measures once the dumps and other facilities are already in place.....

In 1981 approximately one year after the mine opened, E.P.S became alarmed at the acidic trend of sample results from the Provincial Waste Management's (W.M.) sampling program. They quickly alerted W.M. and Equity. E.P.S.'s concern was eventually translated into alleged violations of the Section 33(2) of the Fisheries Act.

By the spring of 1982 Buck Flat citizens were agitated by the acid generation problem and its cursory pre-mine consideration. To stem rumours and rising mistrust, the Equity Silver Surveillance Committee was born.

d. Equity Silver Surveillance Committee

Chairman - Waste Management Branch

Membership - Waste Management Branch
Equity Silver
Ministry of Mines
District of Houston
E.P.S.
Buck Flat Resident(Glenda Ferris)
D.F.O.

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The Committee acts as an information exchange to monitor the company's Pollution Control Permit, the Federal Metal Mines Effluent Regulations and the Ministry of Mines reclamation requirements.

Equity Silver's progress report to Committee:

- installation of acid water collection which includes ditches and pump
- Bessemer Creek diversion into Berzelius Creek to avoid acid bearing zone
- enlargement of collection area and raising height of silt check dam
- collection area lined with glacial till
- undertaking hydrology study about precipitation levels, surface water and subsurface water
- four weirs constructed to measure flow rates in drainages (flow rate data is a requirement of Equity's W.M. 1980 permit)
- use of surfactants to kill bacteria for temporary acid control must be done under small scale experimental conditions
- Pollution Abatement Order by W.M. says Acid Mine Water Treatment System design and pilot studies completed by June 30, 1983.
- W.M. environmental monitoring program outlined.

2. Omineca Mining Road

No further progress to report. (see 1981 Annual Narrative)

3. Noranda Mines Division Babine Lake

Bell Copper Mine received approval from the W.M. Branch to decant 250 million gallons of surface water from its tailings pond into Babine Lake. 96 hour LC_{50} tests on tailing pond water were acceptable to the D.F.O. The S/D doesn't know if any predictions of sublethal effects on fish were made by D.F.O. but two major potential problems offset any further decanting assessment. As described in the Chemical Spill section, Bell's tailing pond retaining wallsmay not withstand high water levels, and secondly, there is reason to believe portions of the tailing walls may be acid generating, so it may be best to decant over the top. (John Stockner, D.F.O. says Babine Lake has a high capacity to buffer out copper, etc.)

4. Chemical Spills & Effluent Discharges

a. Bell Copper Tailing Pond

Discription of Area

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Discription of Area continued

Site location is Newman Peninsula, on east side of Babine Lake, approximately 8 miles north of the town of Granisle. Registered owner of property is:

NORANDA MINES
1050 Davie Street
Vancouver, B.C.

Pollution Control Permit allows the discharge of effluent from copper ore concentrator into tailings impoundment.

Problem

At approximately 6:30 P.M. Friday, March 26, 1982, liquid effluent (not tailings) began leaking through tailings dam #5. Effluent drained into a sump on the outside of the tailings dam. Sump pump could not handle the excess flow thus the effluent broke through the sump dam and found its way into Hagan Arm, Babine Lake. Mr. Bob Jedrzeyczak (Sr. Mine engineer) estimated a flow of 2,000 gallons per minute for 24 hours, a reduced flow of 600 gallons per minute for 24 hours and then 200 gallons per minute for 6 hours. He estimated a total of 5 million gallons entered the lake. Leak was completely under control by early Monday morning, March 29, 1982.

Investigation

Received a call from A. Ackerman at 0900 Hrs. on Tuesday, March 30, 1982. He advised me of the tailings leak. Frank Rhebergen (Waste Management) and I gathered equipment and drove to the Mine. We arrived at the Bell Copper Mine at 1400 Hrs. we met with Mine Manager, Mr. Gil Leathley, Mine Superintendent Mr. Bob Hamigonchie, and Senior Mine Engineer Mr. Bob Jedrezejczak. Mr. Jedrzejczak took us to tailings dam #5 where the leak occured. We observed the following:

1. A road or ramp had been constructed down the inside of the tailing pond so trucks could get to the leak area. Photographs 3, 4, & 5.

2. I saw two holes in the cyclone sands where the effluent had created a whirlpool effect and erroded the sand. One hole was approximately 8 feet across and the other 16 feet.

3. There was an 18" tailing line laid along the ramp and three smaller lines coming off it. Tailings were being deposited.

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Investigation continued

4. Photographs taken by D. Pierce.

5. Next, I looked at the sump area. The effluent eroded a hole 3 feet wide and 2 feet deep in the south end of the sump dam. Pump was working and a small volume of effluent was coming into the sump from the tailings dam.

6. The effluent breeched the sump dam and then followed an existing water course to Hagan Arm, (Babine Lake). Photographs 6, 7, & 8.

7. Frank Rhebergen (Waste Management) cut a hole in the ice and then took water samples. Sample was taken about 100 feet from shore. Some effluent would have run on top of the ice and the remainder would have entered the lake along with the creek water.

8. It was obvious we were not going to have enough time to interview mine personnel, so we returned to Smithers.

9. I returned to the Mine on Wednesday, March 31, 1982 and took statements from mine personnel.

Field Investigation Continuing March 31, 1982.

- I took statements from the following people:

1. Mr. Paul Michell - he tours the tailings pond and checks water levels in all sumps. He was the first to notice the water rising in the sump dam. He notified his boss, Mr. Palluau.

2. Mr. George Palluau - (Mill Shift Foreman) Mr. Michell's supervisor. He made arrangements for a second pump to be installed at sump.

3. Mr. Mike Brunn - Concentrator General Foreman.

4. Mr. John Kasakoff - Concentrator Superintendent.

5. Mr. Bob Jedrzejczak - Senior Mine Engineer.

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Summary

Routine check of sump #5 by Mr. Michell about 6:45 P.M. Friday, March 26, 1982 indicated water was rising. Mr. Michell notified his supervisor Mr. George Palluau who went to the sump and checked the pump. Pump appeared to be in good working order. Palluau called his supervisor Mr. Brunn and they decided to have another pump installed.

Mr. Brunn made arrangements to bring a tailings crew from Granisle. They arrived at 9:00 P.M. Friday night. By 10:00 P.M., Brunn realized second pump would not handle the flow so abandoned that idea. Crew started laying tailings line and installed tailings pump. Tailings are used to plug the leak. The tailings line had been dismantled about mid March so dam #6 could be raised in elevation. Early Saturday morning crew found source of leak inside tailing pond. The exact location was difficult to find because ice and snow covered the holes. Saturday morning two cats started building ramp down inside of tailings pond so truck could haul fill to the leak. By Saturday noon flow was reduced by 50%. By 4:30 P.M. Sunday, tailings line and pump had been installed and tailings were being deposited. Crew had difficulty installing tailings pump because a 2" fresh water line froze and had to be thawed out. Leak was completely under control by early Monday morning.

Mine Manager, Gil Leathley tried to contact Mr. Terry Roberts of Waste Management on Saturday but Roberts was not home. Leathley contacted Mr. Stan Hunter of Mines on Saturday evening. Hunter suggested to Leathley that he could phone Roberts on Monday morning. Hunter did not notify any Environment people. This is very poor. Mr. Bob Jedrzeyczak phoned Waste Management on Monday morning. Bob Hamigouchie tried to contact Terry Turnbull on Sunday evening but could not get him.

Recommendations

1. A better liason be developed between Mine personnel and Environmenta people so industry knows who to contact in case of an emergency and who to contact for general consultation regarding potential problems.

2. That sumps with a potential for overflowing, particularly sump #5 but there may be others, be pre-wired with electricity so additional pumps could be installed quickly. Also, an extra sump pump pipe be laid to accomodate an extra pump. If this were done, an extra pump could be operational within two hours.

3. Tailings lines and pumps must be operational to all areas around the perimeter of the dam at all times with one exception. When the dam is being raised, tailings line can be dismantled for moving. The line must not be unoperational for more than 24 hours. This may cause some problems for the company but I feel that it can be

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done. It is extremely important that these tailings lines be operational because it is the tailings that are used to seal the dam and prevent the liquid from escaping.

4. Spigget or cyclone deposits must be made at regular intervals around the perimeter of the dam and a 100' beach must be maintained in all areas.

5. Water levels in the tailings dam be inspected frequently to ensure that liquid effluent is not coming in contact with the sides of the dam. Inspections should be more frequent in the spring when melting snow may cause water levels within the tailings pond to rise quickly.

6. I recommend no charges be laid for the following reasons:

   a) The company made a reasonable effort to stop the leak. The only fault I can find is that the tailings line to #5 dam was not in working order.

   b) Apparently water samples taken by Waste Management were not large enough for legal (Bioassay) samples.

   c) Mine personnel tried to contact Waste Management but could not so they contacted Mr. Stan Hunter of Mines Branch. Hunter neglected to contact other agencies. I feel the courts would concur that Bell Mine made a reasonable effort to contact Government people.

   d) At this time, I am not aware of any significant damage such as fish kill etc.

   e) We allow other mines in this area to dump large quantities of tailings directly into water with no treatment whatsoever.

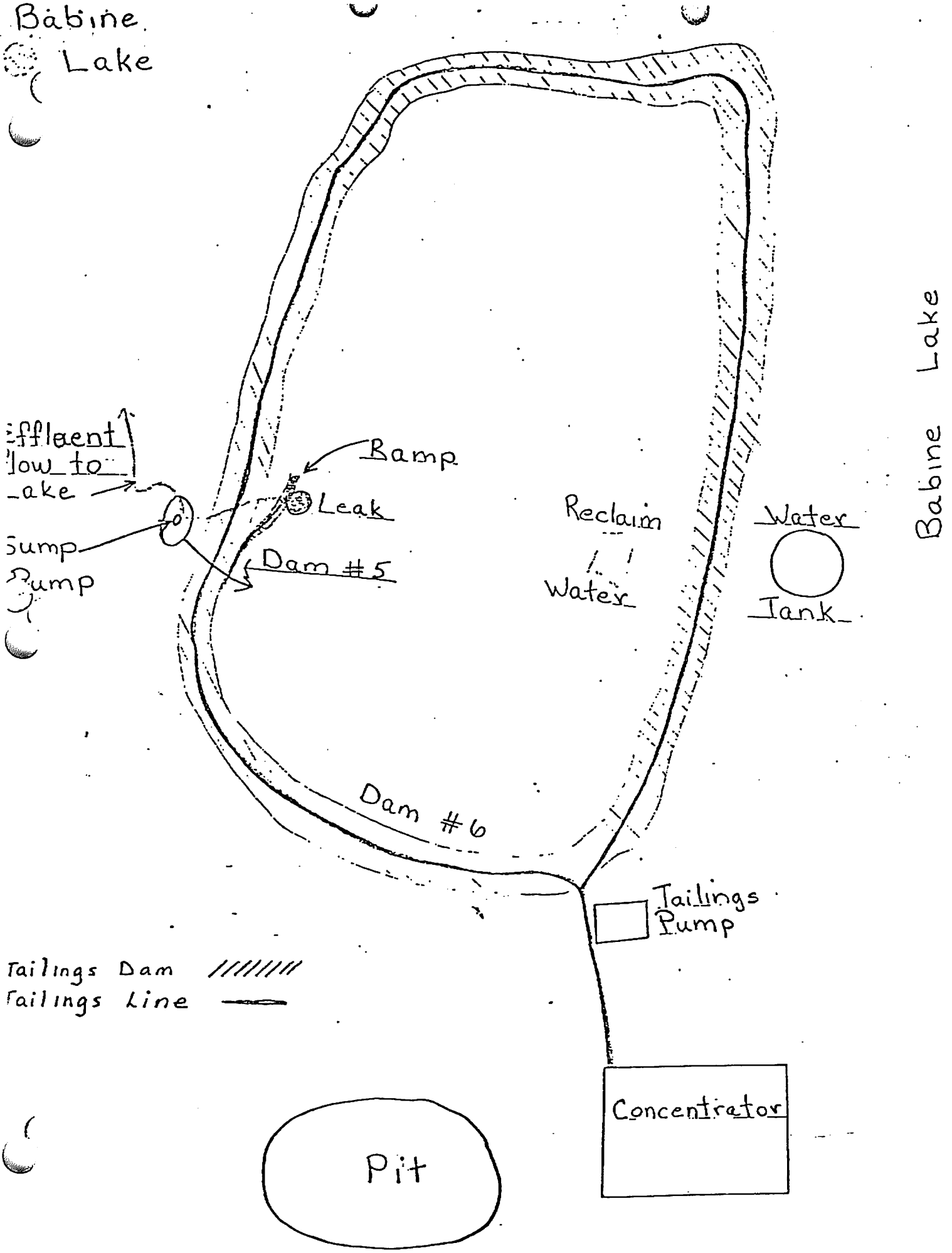
   This company is making an effort to control their waste. I think we can persuade them to do even better.

EXHIBITS

1. Schematic of the Mine and Tailings Pond.
2. Photos of tailings pond.
3. Letter of Transmittal.

DESCRIPTION OF PHOTOGRAPHS

1. Generalview of tailings pond.
2. General view of tailings pond.
3. 18" tailings line and top of ramp.
4. Middle of ramp with 18" tailing line.
5. Leak area showing sand deposits and tailings being deposite
6. #5 sump and pump - dark area on right side of sump dam is where effluent breeched the dam and continued on the lake.
7. Closer view showing the path the effluent took on its way to the lake.
8. Shows paths of effluent to lake; lake in background.


Babine Lake
Effluent flow to Lake
Sump
Pump
Ramp
Leak
Dam #5
Reclaim Water
Water Tank
Dam #6
Tailings Pump
Tailings Dam
Tailings Line
Concentrator
Pit
Babine Lake

EQUITY SILVER MINES LIMITED

1982 May 31

Waste Management Branch
Skeena Region
Bag 5000
Smithers B C
V0J 2N0

Attention: Mr. P. Khare

Dear Mr. Khare:

Re : Seepage Pond Overflow 1982 May 12 - 13

Within the time frame between 3:00 P.M. May 12 and 8:00 A.M. May 13, an overflow situation developed at our tailings pond seepage dam. Mill personnel checked facilities at seepage pumphouse at 3:00 P.M. May 12, 1982. The pressure ratings on the discharge line were normal and the system was working well. At this time it was noticed that a gate valve on the discharge from a non-functional pump was closed. The valve was opened resulting in a short circuiting of the system through the non-functioning pump. As a rule there are check valves on both discharges, but due to most recent work on the pump lines this check valve was eliminated. This valve has been replaced since the May 12 mishap.

Seepage pond facilities were checked at 8:00 A.M., at which time the overflow condition was observed.

The following corrective action was taken.

- Heavy equipment was moved in and the spillway section of the dam was blocked off stopping the flow at 10:00 A.M., 1982 May 13.

- Diversion ditches have been dug to divert runoff into Foxy Creek away from the seepage pond.

- The faulty pump was replaced the following day.

✓ Pumps with stainless steel components have been ordered.

✓ A check valve was placed back in the system.

.../2

P.O. BOX 1450, HOUSTON, B.C. V0J 1Z0 CANADA (604) 845-7799

- The high level warning system for the pond was checked and found to be malfunctioning. Further investigation isolated the problem in the mill control room and was caused by a change made to a relay panel.. This problem has been corrected and the high level alarm enunciates in the mill control room.

The estimated flow rate over the seepage dam was 150 gallons per minute. Of this flow 25 gallons per minute is estimated to be tailings seepage water and 125 gallons per minute being snow melt run-off.

Since the May 12-13 incident, operation of the seepage pond facilities are working well and the pond is being maintained at a low level. The interval of checks on the system have been increased to ensure the equipment is in sound working order.

It is felt the overflow material may not be overly harmful to Foxy Creek in that the dilution factor was extremely high at the time of the mishap.

We are presently reviewing all environmental protection systems and taking remedial action so as to prevent occurrences of this nature.

Yours truly,

Robert Patterson

R. Patterson
Environmental Co-ordinator

RP/dms

c.c. - Mr. R. McGinn, Mines Inspector & Resident Engineer
c.c. - Mine Manager
c.c. - Mine Superintendent
c.c. - Mill Superintendent
c.c. - Engineering File

Maximum Discharge:
150 x 60 x 17 = 153,000 gals

Tailings seepage
25 x 60 x 17 = 25,500 gals

b. Equity Silver's Tailing Seepage Pond Overflow

See attached letter from Equity Silver Mines Limited to Waste Management Branch (appendix 1 & 2).

B. ENVIRONMENTAL ISSUES

1. Kemano II (alias Kemano Completion)

January 6 - Interior News - A special agreement attached to Alcan's 1950 water licence protects the company from increases in Provincial water licence fees. Alcan effectively by-passes a recent 300 percent water rate increase not accorded other users. Alcan's special payment agreement is based on the numbe of megawatt hours and the market price for aluminum.

Alcan is charged for the power it sells to B.C. Hydro up to 1978 Provincial fee assessments. Fee costs above 1978 levels are paid by B.C. Hydro. In 1982 B.C. Hydro pays an estimated $3.00 a megawatt hour fee and Alcan ¢.25 a megawatt hour.

In 1981 B.C. Hydro bought $8.4 million in electricity from Alca on the other hand, Alcan paid the Provincial fee of $1.4 millio for this power. Moreover, B.C. Hydro pays a minimum power pric to Alcan whether or not it uses the power.

Note that B.C. Hydro has asked for a utility rate increase of some 21 percent.

January 6 - Interior News - The Regional Districts of Bulkley-Nechako and Fraser-Fort George have given a total of $10,000 to the newly formed Nechako River Task Force. The money will pay for a review of Alcan's Nechako River studies and for a draft operational model of a task force management committee.

The proposed Nechako River Management Committee would ultimatel decide who gets water and how much.

January 13 - Interior News - In addition to Alcan's 1979 Socio-economic study of the Prince George-Prince Rupert Corridor, a new and more extensive study was undertaken in the latter par of 1981. This new survey targets on available manpower, emplo ment and social services in an area; and what additonal require ments would be needed if smelting facilities were constructed in a particular area. Public relations manager Brian Hemingwa says the survey is more extensive and better suited to the corporation's new approach to development in the northwest.

January 13 - Lakes District News - Omineca M.L.A. Jack Kempf Social Credit Party, hails appointment of Stephen Rogers, Soci Credit's Minister of Environment, to the Cabinet Committee on planning and priorities (the review committee for proposed

20/....

energy projects). Kempf says Roger's appointment could be a positive step in ensuring the people of the Nechako Valley that the proposed Kemano completion project gets the scrutiny it justly deserves.

January 20 - Interior News - Wind monitoring sites will be set up near Houston, Burns Lake, Endako, Vanderhoof and Hazelton. Wind data will be used to help locate a smelter away from populous centres and agricultural areas.

February 3 - Interior News - Notes from a closed meeting between Houston council and Alcan Consultants show that reduced flows in the Morice River will affect two of Houston's municipal wells.
A November 1980 public statement by Alcan reqarding their 13 volume base line environmental data study indicated impact studies would not be done until it was established how much water was needed for electricity.

February 3 - Interior News - The environmental group, Save the Bulkley, critiques the $2 million 13 volume environmental inventory released by Alcan. Participants in the environment seminar believe the inventory report is inadequate and superfici

Criticism came on several fronts namely: Fisheries did not include winter analysis; wildlife and their interaction with the environment was not given; water flow information included the period from 1950 to 1980 rather than 1928 to 1980; the former period gives a higher mean flow average, and this is important in calculating the amount of water Alcan needs, no account of water flows needed to flush sediment from fish spawning areas; ground water level change would take place immediately but its effects could take decades to appear.

February 17 - Interior News - New Hazelton town council felt Save the Bulkley's position was based on extra ordinary assumptions and amateur deductions.

Council felt it would be difficult to imagine government agenci delegated to look after natural resources and adjacent interest would sit idly by while Alcan turns the country into a lifeless desert.

Council held the view that water, besides being good to drink, pretty to look at, and a good place for fish also has tremendou potential for hydro power, particularly at a time when communit need industry for employment. Council stated further that citi groups such as Save the Bulkley are dominated by professional pioneers.

March 3 - Interior News - Alcan's Brian Hemingway says three ke project areas show suitable geology for the company's plans.

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The Kenney Dam project was to see if cold water can be transferred to the Nechako River to simultaneously protect fish and save water.

The Nanika River drillings were suitable for dam contruction. The water diversion tunnel from Nanika Lake to Tahtsa Reach was acceptable.

March 17 - Interior News - Bill Rich, Alcan's vice president for B.C., is surprised at the negative tone of criticism leveled at their baseline environmental study by Save the Bulkley. The negative tone disappoints him, Mr. Rich was hoping for a more constructive approach, particularly since Alcan has spent more than $2 million over three years collecting field and published data. Rich states the study was and inventory of numbers and that is the accepted method of collecting baseline data.

The criticism of no impact report associated with the inventory is countered in a letter included with each volume of the study. The letter says, "No potential effects on the environment have been assessed.....they are an inventory of the existing environment.....impact reports will be prepared based on these studies." "I repeat that this is baseline data intended for use in arriving at flows adequate to protect existing resources - not historical or future resources," said Rich.

March 17 - Interior News - Pat Moss of Save the Bulkley says the company should take a look at present impacts on resources and the trends of those impacts.

"This is not a negative comment as suggested by Mr. Rich, but a valid criticism. We make no apology for it."

March 24 - Interior News - Alcan announces a labour market study. Earlier studies have identified both women and youth as groups facing higher than average unemployment rates. Alcan' Darcy Rezac says, "It is important wherever possible, that manpower planning strategies be sensitive to the employment needs of the people in the areas we operate."

April 7 - Interior News - The Regional Districts supporting the local river management concept have commissioned hydrologist Ken Rood of Vancouver to review Nechako River flow data. They have also hired the Westwater Research Centre of Vancouver to develop a legislative model for local river control.

April 14 - Interior News - Alcan will be looking for smelter sites in the next six months as part of its $3 billion expansion Perimeters to determine smelter sites (2) will include studies on wind, labour, socio-economics and geology.

Cyril Shelford an Alcan consultant will examine water sources and agricultural needs. (Mr. Shelford is a long time Social

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April 14 continued
Credit supporter and a local rancher.)

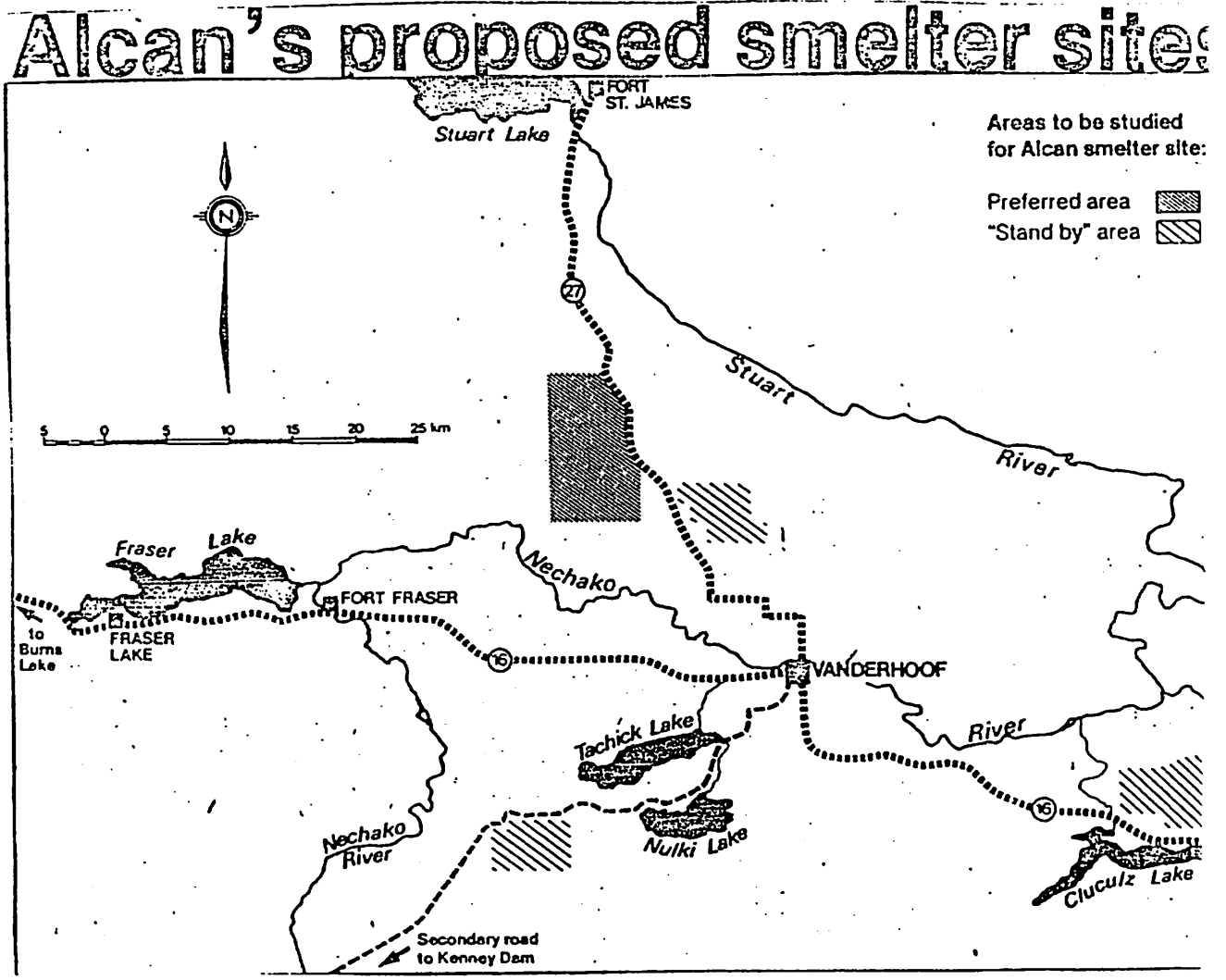
Smelter site criteria influencing these studies are as follows: very interested in the Vanderhoof area, would not be in the agricultural land reserve, would be close to rail, would be close to hydro and natural gas, and would not directly affect a single population centre.

April 14 - Interior News - Doug Smith, an Alcan public relations officer, opens for business in Smithers. "It's a resource centre..for people who want information about Kemano completion...

Groups and organizations wanting corporate help and donations will be channeled through this office.

April 28 - Interior News - One preferred and three alternate smelter sites have been selected around Vanderhoof. A $500 deposit has been place with B.C.D.C. as a "gentlemen's option" on industrial Crown land.

The potential 700 permanent jobs planned for the Vanderhoof area brought positive local reaction. Vanderhoof mayor Don Grantham said it was the best thing since the town was formed.



April 28 - Interior News - Save the Bulkley's reaction to the Alcan smelter site selection near Vanderhoof keys on water volume. They estimate 900 million gallons of water a day would have to be diverted from the Nechako and Nanika rivers. That water volume would be doubled for two smelters.

Alcan is on record as stating it will take the amount of water left after the needs of existing users have been protected.

April 28 - Lakes District News - A volunteer Southside fire department receives a one ton cab and chassis from Alcan.

April 28 - Lakes District News - Public hearings for Kemano completion are expected to begin in 1983. At least one proposed smelter site had to be selected before energy hearings could begin. Bill Rich, "I'd like to emphasize that we're not yet announcing construction of the new plant. We are stating our preference for the site's general location." Rich added that smelter construction would be delayed until 1984 at the earliest as formal applications and public hearings will likely continue throughout 1983. Furthermore, a second smelter site will not be selected until at least 1990. A second site will likely be in the Terrace area.

Rich says the Vanderhoof preference is intended to contribute to the overall acceptability by the people of Kemano completion as well as aluminum production. "The main source of power is water from the Nechako River, so it's understandable that people here want to see some economic benefits. The location is not the most economical from Alcan's point of view, but we can't have everythin our own way."

June 23 - Interior News - A deepening recession, or worse, could mean the end of Alcan's plans to expand aluminum production in the northwest, says Bill Rich.

Earlier in the month, Alcan announced a postponement of a one billion dollar project to build half a hydro project and a 200,000 ton smelter in Manitoba. Weak markets, low aluminum prices and uncertainty in the economy were Alcan's cancellation reasons.

Alcan had an agreement with the former conservative government in Manitoba to purchase a half interest in a hydro dam on the Nelson River. Ownership of power is considered mandatory by the company before it builds a smelter. However, when an NDP government got elected late last year it was not prepared to entertain private ownership of a public resource. Despite the postponement and the economy, Alcan continues discussions with NDP government.

Rich also stated that any project in Canada must be judged agains world wide possibilitues for power generation and aluminum production. Brazil has two "legs" energy sources and bauxite for aluminum production in its favour.

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June 23 continued

On the Nechako River where the amount of available industrial water is still undecided Rich said, the less water available means the smaller size of smelter to be built and could mean it is not economical to proceed.

June 30 - Interior News - Alcan and D.F.O. extend their second annual water flow agreement starting July 1. D.F.O. controls the amount of water the company must release over the Skins Lake Spillway to protect fish populations.

June 30 - Interior News - Alcan has once more postponed a series of T.V. Commercials outlining its B.C. Operations, future industrial proposals and its contributions to a youth skiing league.

Brian Hemingway felt the commercials may have to be changed to erase implications of pushing job creation and to avoid raising expectations at a time of rising unemployment.

July 14 - Lakes District News - In 1979 Alcan undertook a five year $2 million project to clear some of the dead standing trees from Ootsa Lake. Trees were not harvested behind the Kenny Dam and their presence is both unsightly and a boat hazard. Four men of the seventeen man crew have been laid off this year which reflects the company's spending restraint during the recession.

July 28 - Interior News - Water flows through Alcan's Skins Lake spillway into the Nechako River were boosted from 2,000 cubic feet per second to 6,000 cubic feet per second to meet fishery objectives.

August 4 - Lakes District News - Brian Hemmingway of Alcan stated a lot of factors go into choosing a smelter site and one of them is social. Vanderhoof was suggested to us by community leaders who said, "You are asking us to give up a portion of a resource. What's in it for us?" A smelter means jobs and taxes, said Hemmingway-although we aren't in the business of providing those things. We're in business to make money.

September 22 - Lakes District News - The Alcan tree clearing project at Ootsa Lake will shut down early because funds ran out.

Whitesail Lake which is part of the reservior complex was raised 120 feet by the Kemano I project.

October 6 - Lakes District News - Referring to Whitesail Lake, Lorne Duncan manager of Alcan's B.C. Power operations says, "We can't promise but hopefully we will clear the whole thing." Some dead trees have been cleared away from the shores of Whitesai Lake to provide emergency landing sites for boats caught out in storms.

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October 6 - Lakes District News - Air emissions from the Kitimat smelter have been reduced from 8.3 Kilos per ton of metal in 1974 to 1.9 in 1981. 1.9 kilos per ton of metal produced meets the 1974 Provincial Standard.

Alcan's Allan Hewitson, public relations manager, said the Kitimat smelter has no effect on Kitimat, and the effects of the fluoride emitted by the plant was confined to the trees.

Sulphur dioxide contributes to the production of acid rain in the Terrace-Kitimat area.

Lorne Duncan, Alcan's power operations manager says environmental impact studies concerning air contaminants can't be done until the project is in place.

October 13 - Interior News - Representatives from the Gitksan-Carrier Tribal Council and Save the Bulkley will meet with members of the Energy Projects Co-ordinating Committee. The Committee is the first step in the process of establishing terms of reference required for a B.C. Utilities Commission panel to hear each energy project proposal.

The Tribal Council wants the fishery resource effects on the Nanika-Morice system.

Save the Bulkley is concerned with three issues, the accumulative impacts of industry on the river, alternate potential uses of the Nanika-Morice system, and the effects of water flow in relation to potential uses.

Writer's Note - The Kemano II issue has gone conspiciously quiet since October. Either the poor economic climate has stalled plans, or conversely hard times may be used to push for quick approval early in 1983.

2. Morrison River Drainage - Pine Beetle Epidemic

Two years ago a red attack pine beetle site was observed on Hearne Hill. Forestry etomologists figure these beetles flew down the hill to valuable pine stands west of the Morrison River.

In April 1982 M.O.F. identified the pine beetle problem as an epidemic, and correspondingly pursued all avenues to have it addressed as quickly as possible.

Meetings and on-site inspections took place during June and Early July with Forestry wanting approval of the resource agencies (D.F.O. & F/W) without providing basic information on their harvesting plans and transportation system. On the other hand, the resource agencies were requesting detailed plans on which to base their approval.

A meeting on July 7 revealed a 42 km log dump, tow and de-water

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system, Forestry had planned for Babine Lake.

On July 15 J.A. Biickert, Regional Manager for M.O.F. sent a letter to this office stating "...I have instructed Eurocan Pulp and Paper Ltd. to commence harvesting operations in the Morrison River Area for the purpose of controlling the Mountain Pine Beetle infestation in tha area through sanitation logging...In arriving at my decision to immediately proceed under Section 125 of the Forestry Act, I am influenced by the emergency of an actively expanding insect infestation of substantial proportions.....I do not wish to do so in such a manner that is detrimental to the longer term fisheries resource. Thus, I can advise that in the future that the storage and or transportation system (Babine Lake) is in fact proving to be significantly harmful to the Fisheries resource...appropriate adjustments made."

G. Jaltema, D.F.O. Supervisor, replies requesting the log transportation system be deferred until and impact statement can be prepared.

D.F.O. also agrees to respond quickly to those aspects of the proposal which can be resolved without more data collection. Later discussions finally resulted in D.F.O. agreeing to Forestry's short term emergency plans, providing appropriate fishery studies are made to determine the long term effects on Hatchery Arm and other sensitive areas along the water route. Furthermore, if the studies indicate some deleterious effects, alterations or suspension of activity may occur. It now remains for Forestry to reply to this latest proposal.

3. Gitksan-Carrier Tribal Council and Equity Silver

Stephen Rogers' Minister of Environment, receives a letter from Neil Sterrit Jr. on May 26 "....Buck and Maxam Creek watersheds where the mine is situated are owned by the high chiefs of the Moricetown Carrier...." The Tribal council is concerned about the chemical spills and acid generation problems at the mine.

The Provincial Minister responds on June 24. The Ministry staff in Smithers has been working intensively on the acid generation problem since December 1981, he says. And your requests for mine abandonment plans had been referred to the Ministry of Mines.

R.H. McClellend, Minister of Mines, writes on July 28."..... The Mining Regulation Act requires that a mining company obtain a reclaimation permit and post a bond. The reclaimation permit of Equity Silver is in the process of being amended, and will indicate what steps are being taken to solve the acid mine water problem in the long term.....The company is not required to submit an abandonment plan at this time but will be required to do so one year prior to closing down its mining operations....."

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August 20 Neil Sterritt corresponds with Brian Smith, Ministry of Mines. He writes ".....The Equity Silver reclaimation permit is in the process of being amended, presumably as a result of the acid generation and heavy metal pollution...., we would like to formally request that the terms and conditions of the permit amendments be subject to the advertising and public review procedures required when a permit is being approved for the first time....."

Mr. Sterritt's request for public hearings is denied; he is asked to consider being a member of a public and government committee called the Acid Mine Drainage Surveillance Committee.

Late in the year the tribal council asked for Surveillance Committee membership and the Waste Management Branch, chairing the committee, has allowed observer status only.

4. Herbicides and Forest Management

Forestry officials are concerned about the heavy growth of "Weed" species taking over some of the logged areas. Alders, Willows or Poplar have been taking some of the best soil sites, getting the jump on conifer seedlings thereby slowing conifer growth through shading and nutrient uptake. To gain back these sites, Forestry wants to use the herbicide 2, 4-D.

As part of a program to educate the public, forestry brought a University of Oregon Professor to the northwest. Dr. Mike Newton, attended meetings across the northwest including a silviculturists conference. He claims 2, 4-D is a safe herbicide and has applied it on himself, his family, his garden and his drinking water. He also believes Agent Orange is safe. The professor felt the best method of brush control is quick planting after logging with tall seedlings (a five year tree rather than one or two).

Faint rumblings of mass insecticide forest spraying programs may also crystalize in 1983.

B. INDUSTRIAL DEVELOPMENT

1. Bell Copper Mine

Bell Copper shut down on July 30th for a projected six week period. Falling copper prices have forced the closure in which the copper recovery rate is 8 pounds per ton of raw material.

320 People are affected by the layoff, the mine site is scheduled to close in 1988 unless other deposits are developed.

The mine still has not opened and the Dept. of Mines is asking for reclaimation plans. A subject of considerable interest

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to the D.F.O.

2. Granisle Mine

On July 2nd the mine closed for one year. 300 people were laid-off.

This mine is scheduled to close in 1986. Reclaimation plans are in the works.

3. North-East Coal Development

The mining companies are undertaking a coal dust monitoring program. The program is slated to start in December of 82. The monitoring will be financed and operated by the mining companies, but the dust readings will be audited by the Ministry of the Environment.

4. Crowsnest Resources have begun preliminary environmental & social impact studies on the effects of an open pit mine in the Telkwa River area. Read Environmental & Planning Associates of Vancouver were hired to carry out preliminary work on wildlife, fisheries and environmental design. Crowsnest is in the final stages of drilling to define the boundaries of the coal field.

5. North-East Coal shipments are slated to begin by December 1, 1983. Smithers can expect up to 22 trains a day, 11 eachway by the spring of 1984. This influx of trains means C.N.R. will have to increase its number of employees by 160 to 310 in the Smithers area.

6. Enhancement Opportunities

The Fulton River and Pinkut Creek fish hatcheries - two of the largest such facilities in B.C. were on the verge of being contracted out to private companies in 1982.

7. The provincial fisheries section of the Fish & Wildlife Branch will be receiving $300,000 from the salmonid enhancement programme to construct a steelhead fry-rearing station on Toboggon Creek.

8. A processing plant has been proposed in the Bulkley Valley area, the plant will handle trout from the local trout farms, process them and ship them to market. Once in operation the plant will employ 3 - 5 people on a permanent basis.

C. Obstructions & Diversions

Beaver dams were removed on Kathlyn Creek during coho migration. The dams had to be removed anywhere from 1-2 times per week. Beaver dams on Toboggan Creek & Morrison Creek were passable & did not require maintenance.

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A canoe trip was done on the Telkwa River to determine if the head waters were utilixed by salmonids. The river is navigable by canoe and salmonids were found to be utilizing the back channels and small lakes.

Further studies should be done to determine to what degree the upper river is utilized by salmonids.

E. Referrals Processed in 1982

		1982	1981	1980
1.	Water Licences	36	50	48
2.	Placer Mining Licences	--	1	1
3.	Gravel Removal Operations	13	7	1
4.	Logging Activity	19	48	7
5.	Highways	1	1	4
6.	Railways	--	2	0
7.	B.C. Hydro	--	0	1
8.	Mines	28	22	23
9.	Stream Crossings	1	1	5
10.	Dyking	2	5	3
11.	Out Falls	2	3	3
12.	Land SUP	17	11	3
13.	Land Fills	0	0	1
14.	Commercial Fish Farms	1	1	0
15.	Pesticide Projects.	1	0	0
		121	152	100

VII TRENDS IN THE FISHING INDUSTRY

A. Food Fishing

1. Bear Lake Food Fishing

The most traditional food fisheries within the Subdistrict
As long as the Bear Lake Sockeye run has low escapement, fishing pressure will continue to shift to Bear River chinook stocks.

The chinook are being caught by some and then backpacked over 3 km to camp. Due to budget restraints in 1982, the Bear Lake chinook stocks could not be assessed (as requested in 1981 narrative) for a harvestable surplus. If, during the 1983 escapement it is found that there is no available surplus of Bear River chinooks, then regardless of fishermen notificatio court action will undoubtedly be necessary for observance of the closure. (Bear River is closed to the taking of chinooks for conservation) Subdistrict staff request direction as to whether this illegal chinook fishery should continue or be stopped.

2. Babine Band Food Fishery

This year the trap fishery supplied the elders of the Lake

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Babine band with fish. All and all the fishery went well. Some problems arose however, with the addition of some status natives from other bands (ie. Stewart band) also requesting permits to obtain fish this way.

With the increasing hard economic times it is becoming increasingly evident that the trap fishery will become more popular with the bands and may even end up being the way of supplying their entire needs.

1982 produced a first in Smithers S/D - Babine Lake Food Fishery, as Fort Babine members became entrepreneurs in the Indian food fishery. For an unknown dollar amount, the Fort Babine Band rented net sites and cabins to other tribal groups during the food fishery. How much revenue this produced for the Fort Babine Band is unknown, but it provides incentive to continue and expand?

The commercial sockeye jack fishery from the Babine counting fence did not take place this year.

In 1983 it is quite evident that the Babine Band will persist in their efforts for fishery - related jobs; and a larger share of managerial responsibilities for existing fishery establishments.

3. Food Fishery General

N/A this year.

B. Sport Fishery

Some anglers complained about jet boat traffic while they worked their favorite fishing hole at 06:00 in the morning. Anglers are likely to seek a river boat ban some time in the future on the Bulkley-Morice system.

IX ENFORCEMENT

Nine counts were alleged in 1982 for violations of the fishery regulations.

Person Charged	Regulation	Deposition
D. Cooper	BCFR - 29(8)	$200.00
G. Joseph	Not returned by Crown Council	Pending
G. Moore	BCFR - 29(5)	Pending
N. Moore	BCFR - 29(5)	Pending
L. Corneil	BCFR - 29(8)	75.00
L. Fulson	BCFR - 29(8)	75.00
J. Katasonoff	BCFR - 29(8)(a) BCFR - 29(8)(c)	Pending
M. Antoine	Not returned by Crown Council	Pending

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Organized salmon poaching within the Subdistrict boundaries is on a definite upswing. With the current economic recession it is quite evident that salmon poaching will esculate during the 1983 fiscal year.

During the 1982 season, definite problems arose with the Crown Council handling cases before the courts. The problems ranged from improper preparation for a case to what appears to be the inability to return cases completed for future court appearances. Enforcement is a key management tool and is an extremely costly one, if the officers of Smithers Subdistrict are going to be expected to carry out enforcement roles, then adequate Crown Council must be supplied. 1983 will undoubtably produce more violations, we would like to see our cases given some attention and handled in a professional way.

X PREDATORS

Bears & Merganzers were plentiful on Babine Lake and its tributaries.

XI ADMINISTRATION

A. Staff

1. Fishery Officers: T. Turnbull GT-3
   D. Meyers - Retired/82
   D. Burnip GT-2

2. Wardens: A. Klopfenstein (May 4 - Dec.4)

3. Guardians: H. Blodgett - Bulkley-Morice (June 15 - Oct.31)

4. Trainee: Nil

5. Recommendations

The Subdistrict shorthanded this year. Guardians are needed for the Fort Babine and Bear Lake areas to monitor the food fishery accurately, to obtain spawning escapements, to remove stream obstructions, to patrol the sport fishery and to observe forestry and highway work.

XII EQUIPMENT

A. Vehicles

1980 Dodge P/U truck
1981 Ford Bronco

B. Boats

One inboard launch (Legace Bay), One river boat, and One outboard lake boat.

C. Boat Trailer - One

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D. Outboard Motors

1. Mercury 50 H.P. (2) with jets
2. Mercury 40 H.P. (1)
3. Mercury 20 H.P. (1)
4. Johnson 10 H.P. (2)
5. Johnson 5.5 H.P. (1)

E. Chain Saws - Three

F. Long Guns

30-06 (2)
12 guage (1)

G. Hand Guns - 357 Mag (3)

XIII INFORMATION, EDUCATION & OTHER PROGRAMS

Nothing Specfic