

KETCHIKAN AND QUARTZ HILL MOLYBDENUM:
A CASE STUDY OF A COMMUNITY FACING CHANGE

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I. INTRODUCTION

In the Fall of 1974, U.S. Borax and Chemical Corporation, a subsidiary of Rio-Tinto-Zinc, Inc., made a major molybdenum find in the Quartz Hill area, off Boca de Quadra in the Tongass National Forest. Subsequent to that discovery, U.S. Borax, using boat and helicopter access, did core sampling in the area to determine more precisely the size, boundaries, and mineral content of the ore body. In 1977, U.S. Borax requested a special use permit from the Forest Service to build a mining exploration road from tidewater to the Quartz Hill area for the purpose of bulk sampling. Bulk sampling is necessary to make a final determination of the economic feasibility of developing a full scale molybdenum mine at this site.

In 1977, the Forest Service entered into a cooperative agreement with the University of Alaska's Institute of Social and Economic Research (ISER). It was agreed that case studies would be done on each of three Tongass communities which have dealt with, or are dealing with, the prospect of important social and economic impacts fostered by the changing uses of nearby natural resources. One of these communities is the Ketchikan Gateway Borough, which is facing the possibility of this molybdenum mine being developed 45 miles east of the community in the Quartz Hill area. This mine, if it is developed, will have major impacts on that community.

As managers of the land containing the ore, the Forest Service will be making a number of decisions related to this project - decisions which ultimately may affect Ketchikan. Hence, the Forest Service was interested in learning more about the opinions of Ketchikan's citizens relating to this potential development.

This report is divided into two parts. The first part is concerned with the perceptions of Ketchikan citizens about this proposed development, the reasoning they use to substantiate those opinions, and to a certain extent, the validity of these opinions. Part Two will discuss residents' perceptions of Forest Service decision making, and suggest the role the Forest Service could assume in future decision making.

The data used in this report was collected between June 10 and June 25, and any analysis, recommendations or conclusions are based

on the situation and perceptions held at that time; in other words, this is very much an on-going process - a "case study" still in the making.

Information used in this report was gathered from: portions of the Administrative Appeal (filed against the Forest Service, by the Sierra Club and others, February 1977), newspaper articles, Environmental Impact Statement - "U.S. Borax Proposed Mining Access Road," the SRI International Report "Impact of the Withdrawal of Alaskan Federal Lands," the Mineral Task Force Report prepared as part of the Tongass Land Management Plan by the Forest Service, numerous personal interviews with Forest Service personnel and Ketchikan residents, and from opinions expressed at the Resource Development Conference, held in Ketchikan on June 23, 24 and 25, 1978. Complete citations may be found in the bibliography.

II. PERSPECTIVES

There are actually three different, yet overlapping perspectives, one might use to analyze the impacts of a major mine at Quartz Hill. There is a resident perspective concerned with the road and proposed mine as it will influence the local economy and lifestyles. The economists at the conference in Ketchikan generally had a second perspective. As outsiders, they viewed Ketchikan as a small city facing potentially grave impacts from a major development whose builders may not, and indeed probably won't, look out for

Ketchikan's interests. A third state aspect also exists. Many perceive this development, rightly or wrongly, as a "test case." In a state attempting to establish a more stable and less oil-dependent economy while coping with an image as unfriendly to non-renewable resource developers, this "test case" perception may have some validity. While this report will deal primarily from a local perspective, these other viewpoints should be kept in mind.

III. PRESENT SITUATION

A. History

At present, the only major decision that U.S. Borax has made in this area is to build a road to the potential mine site. To properly evaluate the road proposal and to meet National Environmental Policy Act (NEPA) requirements, the Forest Service wrote a draft, and later a final Environmental Impact Statement, which evaluated the impact of this proposed 11 mile access road on a roadless and undeveloped area. Through this EIS process, the Forest Service decided U.S. Borax would be allowed roaded access to their claims.

A number of conversation groups, fishermen organizations and the Ketchikan Indian Corporation contested the EIS and are presently appealing this decision. This appeal is based primarily on two contentions: 1) the continued use of helicopter access was not adequately investigated and; 2) NEPA was specifically designed to ensure that in evaluating potential impacts of a project, a piecemeal

approach is precluded. The appeal alleges that the Forest Service, in not analyzing at this time the total impacts of a mining development on Quartz Hill, has used a piecemeal approach. U.S. Borax and a number of business and labor interests have joined the U.S. Forest Service as intervenors in this appeal.

One should not, however, conclude that parties to this fall neatly into two diametrically opposed groups - the strong pro-road sympathizers and a strong anti-road forces. The interviews and conference held in Ketchikan confirmed that there were strong feelings on both sides of the issue; yet there are also a large number of people who haven't yet formed strong opinions.

Nor is road access the only issue, which people are concerned about. Some favor allowing U.S. Borax roaded access to the site, but want to reserve judgement on the mine. Other people feel any development will be a valuable asset to the Ketchikan economy. A third group like Ketchikan just as it is and don't want U.S. Borax building a road or a mine. Finally, many people just don't know what to think about any of this.

B. Overview of Perceptions

Those people in Ketchikan who have already formed strong opinions about this proposed development (pro or con) are generally envisioning different and often conflicting scenarios on just how this will impact Ketchikan and the Boca de Quadra area. Those who support this development envision (with variations) one particular

scenario; those opposing it, another.

Generally, those people supporting the proposed project favor increased economic growth for Ketchikan and are very optimistic about U.S. Borax's good intentions. They frequently describe U.S. Borax as "wanting to be a good neighbor", "friendly people", "wanting to help Ketchikan". They feel that it is a matter of good business practice on the company's part to insure Ketchikan's support and cooperation. These people emphasize increased job opportunities, a more diversified economy and a broader tax base - all of which, in their view, would make Ketchikan a better place to live.

U.S. Borax is part of a huge multi-national corporation; because of this, people opposing this development believe that concerns of Ketchikan citizens would not receive much consideration. Many of them expressed doubts about the integrity of U.S. Borax, and felt their questions to personnel had not been honestly and fully dealt with. These people are not unhappy with Ketchikan the way it is now, and have some strong environmental concerns related primarily to potential impacts of mining and ore processing on the salmon fishery. They also wonder what the cost of this new economic prosperity will be. Generally, people who are undecided about these proposals, may share many of the hopes and concerns of people already involved in this controversy, but are waiting for more facts to come available before they form an opinion.

The following is a table of the major issues and opinions put forth by those people in the interviews and at the conference who had already formed definite opinions related to this potential development.

TABLE 1
FACTORS CITED FOR AND AGAINST THE DEVELOPMENT

A. The Pro-development Case

<u>ISSUE LEVEL</u>	<u>REASONS CITED IN SUPPORT OF U.S. BORAX DEVELOPMENT</u>	<u>RESPONSE BY OPPONENTS</u>
Local/ Regional	1. Provide Job Opportunities	1a. For Whom? Will they train locals? 1b. Will they support local hire? 1c. May increase the unemployment, as people move up to apply for jobs.
National	2. Patriotism, national security, balance of payments.	2a. Other mineral can do the job. 2b. This country is rich in molybdenum. 2c. Molybdenum is not a strategic mineral. 2d. This would be a minute help to balanced payment.
Local	3. Diversify economy--providing a more stable employment base.	3. At what cost to Ketchikan?
Local	4. Provide better local government services (through direct tax monies from U.S. Borax and broadened tax base.)	4. May also increase demand possibly beyond their ability of any new revenues to pay for it.
Local/ Regional	5. New money, income and population into Ketchikan.	5a. Prices might go up. 5b. This new population may not be a stable asset to Ketchikan.
State	6. This is "test case" for state - if not allowed could forestall other mining ventures in the state.	6a. Maybe that's good - give people time to cope with change. 6b. Minerals won't go anywhere - could be developed at a later date.

B. The Con-development Case

<u>ISSUE LEVEL</u>	<u>REASONS CITED IN OPPOSITION TO U.S. BORAX DEVELOPMENT</u>	<u>RESPONSE BY OPPONENTS</u>
Local/ Regional	1. Possibility of severe environmental impacts especially to a salmon fishery.	1a. These problems can be resolved with technology. 1b. Project may help fishery through hatchery and stream improvement.
National	2. May preclude area from park or wilderness designation.	2a. Few go to that area anyway. 2b. Need jobs and a diversified economy more than wilderness.
Local	3. Would degrade community lifestyle through: a. increased population* b. introducing new type of people - may not fit in.	3. Would improve the quality of life through expanded community services and increased availability of consumer goods.
State	4. This may be a "test case" for the state - let's use good judgement in our decisions.	4. The state's economy needs the stimulus.
Local	5. Need for base line data-research on socio-economic and environment impacts before they are created.	5a. Development costs go up if delays occur. 5b. Delays and lack of cooperation by agencies could scare off investors.

* Through increased hunting pressures, crowding of recreation areas and increasing demands on public and private services.

IV. ANALYSIS OF ISSUE AREAS

Most of the issues and discussion related to this proposed development are so interrelated and intertwined that separating individual topics out is, at best, a difficult maneuver.

For the sake of discussion, these topics are pulled apart in the following section and have been organized under the following topics:

1. Economic Diversification
2. Jobs
3. Taxes
4. Infrastructure
5. Community Lifestyle
6. Environmental Concerns
7. Scientific Research
8. Wilderness

1. Economic Diversification

Ketchikan's economic history has tended to follow a sporadic development cycle. Mining development, from 1878 on, was important to Southeast until it eventually became uneconomical. Simultaneously, there was a dramatic rise and after 1941, subsequent continuous decline of the salmon industry. More recently, the Ketchikan Pulp Company has had difficulties in complying with the Federal Water Pollution Control Act; and had considered closing down. Fisheries and wood products are still the two primary industries in Ketchikan, yet there is still constant uncertainty of continued employment in these industries due to fluctuating markets, withdrawals of land from timber extraction, and government intervention in the form of new regulations, shorter openings or tighter environmental controls. To appreciate the importance of the timber industry in Ketchikan and the subsequent tension and discomfort which result at the suggestion of a pulp mill closure, it is necessary to review some statistics.

In the Ketchikan area, the average direct employment in the timber industry between 1970 and 1976, was 1,439 jobs. With a 1975 area population of 13,225 people, there are a total of 3,342 direct and indirect jobs and 8,209 people (56% of the population),¹ dependent on this one industry.

Since the economy of Ketchikan is based on these two main industries - wood products and fishing, this proposed development

would add a third major industry to the town's economy, increasing, many say, the stability of the economy.

Some jobs in these industries are also very seasonal; and mining could provide steady year-round employment. There is also a good chance, in many people's view, that the successful exploration and development of this mine would alert others in the mining industry to the advantages of exploring and locating near Ketchikan.

These issues of economic diversification, economy stability and seasonality are looked at differently by opponents of this proposed development. They think mining could actually introduce further instability into the community. Mining is being subject to increasing government regulations in the realm of water quality, air quality, and preservation of habitat productivity. This mine could in the future, they reason, be facing the same difficult decisions and introducing similar tensions to the community, as the pulp mill had to deal with in complying with the EPA water quality regulations.

World market prices on minerals fluctuate widely; this could lead to shut-downs of the mine until prices rose and made the operation economical again. A further concern is that mining deals with a non-renewable resource. The life of the mine is being projected at thirty years. People are asking what would happen to the diversity and stability of the economy after the molybdenum runs out, forcing the mine to shut down.

Another issue arises here. People who support this proposed development point out that the introduction of a new industry would benefit the local economy through the "multiplier effect". That is, any dollars paid out for salaries or materials in support of the exploration, development and production phases of this mine could circulate and recirculate through the local economy many times over. They feel it would just be good business economics and promote sound industry-community relations for U.S. Borax to do most of their outfitting through Ketchikan.

Those opposing this development question how much of the money connected with the mine would flow into Ketchikan. Of course, they agree that at least some of the employees' paychecks would probably end up in Ketchikan, primarily in payment for personal goods and services. And, certainly the major proportion of the payroll would be spent in Ketchikan if workers and their families were primarily housed in the community. It seems possible to them though, that the major material and equipment needs for the mine might be ordered from Seattle and then be barged directly to the development site. They base this premise on two factors: the potential mine location in relation to Ketchikan and Seattle, and their interpretation of the economics. The direct route from Seattle to the proposed townsite and access road on Boca de Quadra is shorter than a Seattle-Ketchikan route.

Even if a road and townsite were later located at Wilson Arm (an alternative possibility to continued use of Boca de Quadra access) it might be cheaper to ship directly to the site, by-

passing Ketchikan. If U.S. Borax ordered supplies through Ketchikan, people suggest that they would be paying additional shipping and handling costs, first to Ketchikan and then over to the site. Of course, the convenience of purchasing items in town may outweigh any money saving by ordering directly from Seattle. This is another issue which is only speculation at this time.

2. Jobs

This issue of jobs always seems to be an important one in Alaska. The intensity of the focus on jobs in Ketchikan is not created so much by concerns over unemployment (it ranges from 4% to 15%), but rather because: 1) the population is expanding and there are not many new jobs being created and; 2) the constant threats of major job cutbacks in the timber and pulp industry (due to changing land allocations, government regulations, etc.).

In discussing this potential mining development, people have identified two main areas of concern: 1) the kind of jobs being created and the extent to which Ketchikan residents have the necessary skills to qualify for them and; 2) the issue of local hire and U.S. Borax's policy on this. The number of workers needed has been projected, (in the EIS and various appeals documents) to range from 20-50 in the road building and continuing exploration up to 400-1000 in the site construction and production phase. The types of skills needed also vary by development phase. The road

building will require the heavy equipment operators and surveyors associated with any other road building project in Southeast. Exploration requires mining engineers, geologists and diamond drillers. Site construction will require some of the same skills as the road building with the addition of environmental engineers, and workers with building skills - electricians, plumbers and carpenters. Since this mine would probably be an open pit development, many of the same skills which would be needed in previous phases, would also be required in the active production phase.

No attempt is being made here to present a complete list of the skills which would be needed or to predict what U.S. Borax will decide to do. In order to determine if there is suitable labor pool in Ketchikan, some listing of the projected job numbers and skills is needed. It would seem possible that the necessary skills for the construction of this proposed mine are represented in the unemployed labor pool for Ketchikan. Serious questions would still remain, however, regarding whether or not the proper mix of skills would be available at the time when they were needed.

Tied in with job skills is the issue of local hire. Some people are expecting that local hire will be the rule, and they have a number of reasons why this would be the only logical plan for U.S. Borax to follow. They cite: the cost of moving workers up for the jobs, the unfamiliarity which new workers could have with the climate, terrain, and general mechanics of operating in this area - which would lead to high job turnover, and the ill will U.S. Borax would incur from Ketchikan residents if they didn't

insure local hire.

Other people are far more skeptical. They assert that U.S. Borax's record so far is not encouraging, and suggest that: U.S. Borax might be willing to import their labor pool and absorb any losses resulting from high job turnover, if in so doing, they were able to pay lower wages and prevent workers from unionizing. These people also reason that once U.S. Borax began operations, there would be many workers moving up on their own to vie for these new jobs, potentially increasing rather than decreasing the number of unemployed. U.S. Borax hasn't yet begun any training programs for Ketchikan residents and, thus far, the company has placed the responsibility for local hire upon its subcontractors.

3. Taxes

Those who support this proposed development feel that U.S. Borax will pay its fair share of taxes and that the Gateway Borough will develop a method to ensure that it gets an appropriate share of them. These people also point out that a broader tax base would result not only from the U.S. Borax development, but also from other businesses which directly or indirectly, are attracted to Ketchikan because of U.S. Borax's mining.

Other people point out that what constitutes "fair share" could have different meanings and that the Directors of U.S. Borax have a responsibility to their stockholders to maximize profits and thus, to pay the minimum allowed taxes. The Quartz Hill site is

outside the Borough, so the Borough presently would have no property taxing authority over the actual mining and staging area. The Borough does have the option of petitioning the Local Boundary Commission to allow annexation of the area to the Borough.

Federal laws mandate that a percentage of Federal mining taxes be turned over to the State. All or a portion of these Federal revenues, could be turned over to Ketchikan by the State. The state would also receive Corporate income taxes from U.S. Borax.

At present, these are the only avenues by which Ketchikan could receive tax monies from U.S. Borax. How stringently those laws are applied, whether the state would institute a hard rock mining severance tax and whether the Borough could annex and tax the development site, are only matters of active speculation at this time.

4. Infrastructure

Infrastructure refers to the community framework which supports the economic feasibility of a business. Some people are predicting that the infrastructure of Ketchikan would be broader and more comprehensive as a result of this proposed development. Not only could U.S. Borax directly contribute to this expansion, but because of the more favorable economic climate, other industries might want to locate or use the services which are based in Ketchikan.

These people are envisioning such things as:

1. Cheaper freight rates
2. A marine maintenance center
3. A better community college program
4. A better medical center

Of course, payment for these additions to the infrastructure would be made in varying proportions by private industry, the Gateway Borough, the Federal government or the State of Alaska. Some people question this vision by asking who will pay for these additions, how much of the burden will fall on them through taxes, and will government agencies ensure that U. S. Borax pays its fair share.

5. Community Lifestyle

An important concern of Ketchikan residents, should the mine be developed, is the manner in which housing would be provided for workers and their families. U.S. Borax could well decide to build a more or less self-contained company town near the mine and staging area. Some people, however, fear that in locating workers outside borough boundaries, taxation by the borough would be precluded while, at the same time, additional demands could be created on certain local government services. Should U.S. Borax decide to house the workers in Ketchikan, even more questions arise. Will U.S. Borax contract for the housing development on behalf of its workers (such as the pulp mill did) or will individual workers have to secure their own housing? Either way, what

effect will this have on housing values and availability? Further questions arise over how closely U.S. Borax will work with the Borough Planning Department to ensure proper attention is paid to housing patterns, open space considerations, and other "quality of life" concerns.

Many people who support this proposed development think that the workers and their families would live in Ketchikan, and this would help create a broader tax base. With their higher wages, these workers, would pay higher income taxes, perhaps enabling the local government to provide better services. Other people are not so convinced and point out that the demand for services (because of the increased population and potentially different "type" of people involved) could be greatly increased, perhaps exceeding the revenues realized from any increased taxation.

People opposing this proposed development also point out that the economic benefits will not be evenly distributed, and that the social costs may fall heaviest on those who receive little or no direct economic benefits. Those who don't receive direct wages from the proposed mine, or who are on a fixed income may find that increased social and economic costs, such as longer lines or higher prices for goods and services, a lowered sense of community control or a change in community character, outweigh in their mind, the economic benefits.

The most obvious aspect to this whole discussion is the lack of factual information regarding such matters as U.S. Borax's past

dealings on this matter with other communities, or some solid projections of the sensitivity of the size and type of potential impacts on Ketchikan from this townsite location decision. A further difficulty in this, is that residents aren't yet perceiving that in terms of impacts on Ketchikan, this is the second most important decision which U.S. Borax will make. At an even more basic level, the real issue is what kind of community do people want to see Ketchikan become. The actual considerations which begin to bear on any decision regarding "community lifestyle" are the goals, values and identity the community wants to reflect. This should be the framework from which to evaluate such potential developments as a nearby mine.

6. Environmental Concerns

The amount, kind or the concentration of heavy metals associated with the molybdenum ore body on Quartz Hill is not yet known. It is known that such heavy metals as copper, zinc, lead and iron are often found in association with molybdenum and that such heavy metals, even in minute concentrations, can be extremely toxic to salmonoid fishes. This is the main basis for the concerns voiced by the fishermen involved in the appeal. The three rivers in the Quartz Hill area, the Keta, Blossoon and Wilson, are major salmon producers. These rivers have been closed to commercial fishing for a number of years to let the runs build back up again, hence the fishermen feel that they already have a sizeable investment in these rivers. Since the mining of the molybdenum would produce approximately one ton of waste slurry for every four pounds

of molybdenum separated out, there would be considerable tailings produced by this mine. There are only two feasible methods for disposing of these tailings, either by offshore dumping of the slurry, or by depositing the slurry onsite in tailing ponds.

Either method poses grave environmental risks. The safety of marine disposal methods is dependent on the slurry remaining in the deep ocean pit where it is deposited. Strong tidal currents could preclude this option. The feasibility of an onsite method is contingent on the ability of the water treatment systems and the natural soil cleansing processes to ensure that any heavy metals don't leach into the rivers and tributary streams. Other molybdenum mines, such as the ones operating in Colorado use this method, but they are also in an area of much lower rainfall. The Quartz Hill area receives 150 inches of rain per year; an amount of water which might prove difficult to properly treated.

Both the fishery's organizations and the conservationists question whether an environmentally sound method of tailings disposal could be developed. They also wonder if the values accrue to Ketchikan and Southeast from the extraction of a non-renewable resource (the molybdenum mine) would ever outweigh the loss of a valuable renewable resource (the Blossom/Wilson salmon fishery and Keta River Salmon fishery). People supporting this proposed mine suggest that potential problems associated with tailings disposal can be solved with present or developable technology. They also feel that there are enough environmental regulations in force, to preclude any degradation to the salmon fishery. Some carry this a

step further and insist that if this development did ruin a fishery, that might have to be a necessary trade off and hatcheries could be built or the fishery somehow reinstated at a later date. They also suggest that the opposite might be the case. The project may even help the fishery, through hatcheries and stream improvements put in as a part of it.

7. Scientific Research

Since the time when the DEIS was being written, scientists (from either the Forest Service or other regulatory agencies in the Boca de Quadra area) have been collecting base line data.

Those opposing this proposed development maintain that comprehensive base line data should be obtained before any significant intrusions (even a road) are made into the area. During the Resource Development Conference, U.S. Borax announced that they have begun an even more comprehensive program to collect this data; however, some people feel that 1) the road decision should have been postponed until this was complete and; 2) this announcement by U.S. Borax didn't clear up uncertainties over who's collecting this data, what type of data they are collecting and whether or not it's being done in a complete and unbiased fashion.

People supporting this potential development, maintain that the road would have only a minor impact on this area and that U.S. Borax hasn't yet decided to develop a mine. These people worry that any delays which occur after that decision is made could

impair the economic feasibility of the entire project. They reason that these delays might 1) allow development costs to increase faster than the price of molybdenum and; 2) be viewed as implying a lack of cooperation by regulatory agencies; this might undermine investor's confidence in the project.

Of course, opponents to this project suggest that the molybdenum has laid undiscovered for centuries and waiting a few more years to extract it, until potential environmental impacts could be predicted and mitigated, should not constitute an unbearable economic burden.

8. Wilderness

The area surrounding Quartz Hill, has been sought for a number of years as a Wilderness Area or National Park by local, and more recently, national conservation organization. Both Congress, (through Section d-2 of the Alaska Native Claims Settlement Act - (ANSCA), primarily addressed under HR 39 and SB 1500) and the Forest Service, (through the Tongass Land Management Plan (TLMP)), have considered these proposals. Those opposing this potential mine suggest that the road decision should have been forestalled until the completion of these major land use decisions. They are concerned that this road may compromise present and/or future consideration of this land for Wilderness designation.

Of further concern is the fact that U.S. Borax has not made, or been required to make, a commitment to confine their road building and camp facility siting to the Keta River drainage. The

possibility still exists that the company would need a road and/or camp on the Blossom/Wilson drainages. The opponents of this proposed development argue that U.S. Borax should have been kept to helicopter access at least until the company was able to make a commitment on the final road and camp siting needed for the production phase. They feel this is to be especially true since part of the economic justification cited by the Forest Service in giving U.S. Borax permission to build a road up the Keta River, was that this road would be a recoverable investment, should the company decide to develop the site. Helicopter expenses, on the other hand, would not be recoverable.

Most Ketchikan residents disagree with the concept designating certain land as "wilderness", especially in this instance. Jobs and economic diversification, they maintain are needed more than Wilderness designation and they view the potential mine as a provider of both. They further insist that because of the expense and difficulty of access to the Boca de Quadra area, very few people ever go there, and this usage isn't likely to increase significantly (over the 20-30 year lifespan of the proposed mine).

V. FOREST SERVICE DECISION MAKING

Often, how a decision has been made and how people view that decision-making process can have an important impact on the course of future decision-making. While not everyone who was interviewed in Ketchikan had strong pro or con views on this potential development, most had strong feelings about the Forest Service decision-making process. The majority of people had very positive feelings

about the openness and evenhandedness shown by the Forest Service during the environmental impact statement process. Even some of those people who didn't necessarily support the potential mine development felt this way.

Another group of people had the opposite feelings and experiences. This group (generally affiliated with the appellant groups) felt that they had been discriminated against by the Forest Service. They allege that their efforts at information gathering had been both frustrated and at times, obstructed by Forest Service personnel. Further documentation of their concerns and disagreements with the Forest Service is extensively documented in the appeals record. It would not seem to be a fruitful task, at this time, to dissect these allegations and disagreements. While it is important to keep these allegations in mind, it would seem more useful to everyone, and the Forest Service in particular, to discuss some future options and possibilities for dealing the decision-making process regarding this potential mine. This is the focus of the following section.

ANALYSIS

This particular mining proposal has been used on a national scale by both mining companies and conservation organizations. Both tie it distinctly to any land use classification for the Misty Fiords area. U.S. Borax has postured that if this area is designated by Congress as "Wilderness", they will withdraw and cease attempts at operations there. They maintain this in spite of the fact that they would have until 1983 to take the claim to patent and that various compromises have been offered to exclude their operation area from the proposed "Wilderness" area. The mining industry has postured that this is a "test case" and that the treatment accorded the Quartz Hill claims would be indicative of the reception and ease of operation other mining companies would experience in Alaska.

The conservationists view the d-2 battle in Congress as their "last chance" to save Misty Fiords. They point to a lack of past comprehensive Forest Service land use planning and Wilderness classification as the source of their lack of trust in the Tongass Land Management Plan process.

The effect of this posturing has been to enforce feelings of powerlessness on the local level. Both "sides" on the local level have reasoned that their strongest impact would be through joining the forces on the national level. Until the Resource Conference was held in Ketchikan, few people in the community with opposing views had a forum for exchanging views.

Statements made during the Resource Development Conference and in personal interviews pointed to the lack of factual information regarding both the actual operations and future development plans by U.S. Borax and the ways in which these plans could impact Ketchikan. At least until the time of the Conference, people were operating from the basis of their basic philosophies and value systems, without having much of an opportunity to temper those beliefs with the actual facts.

Many of the major issues are not being viewed at their proper magnitude. Issues such as housing for workers, hiring practices, tailings disposal, and the access road have not received the open discussion they deserve. One speaker at the Conference proposed that if U.S. Borax decides to develop this mine, the next major decision confronting them will be the location for the workers housing (either at the site or in Ketchikan). This decision will certainly be the most important mine-related decision affecting Ketchikan. The hiring practices to be followed by U.S. Borax are certainly of concern to residents, yet the information regarding U.S. Borax's policy on this is not known, and is being strongly requested by only a few people. There are only limited ways for disposal of any mine tailings. There are potential problems with either an on-site disposal system or an offshore dumping. This issue hasn't yet been openly confronted. Discussions connected with the access road quickly got buried in the larger arguments regarding the entire proposed project. There has been little new factual information available since the EIS regarding such areas as the road design, the impact the road will have on the stream and methods being used to mitigate any stream impacts.

RECOMMENDATIONS

A. Information

Much of people's position taking and lack of willingness to explore alternatives on the various issues is based on the lack of reliable information. The Forest Service could assume the responsibility for disseminating data which has already been gathered, as well as ascertaining what the future information needs and demands of the community will be. In this sense, the Forest Service could serve as a bridge between citizens and U.S. Borax by requesting, or if necessary, demanding answers to substantive questions. Of course, this is only possible to the extent that U.S. Borax's need to keep some information proprietary would not be compromised.

B. Future-Decision Making

The Forest Service could take a leadership role in determining the scope and timing for future decision-making, rather than standing back and allowing the mining company or some other agency to assume this power. The Forest Service could begin now to decide on the data needed to draft a well researched EIS and the parameters and performance standards which would need to be met before the next phase of the development could begin.

C. Public Involvement

As the public becomes better informed, the Forest Service could invite Ketchikan officials and citizens to participate in the decision-making process. Meaningful "public involvement" can only occur when people are well informed on the issues and they know their opinions will be incorporated into any decisions which are made.

On the topic of public involvement, the speakers at the Resource Development Conference (primarily economists, lawyers and biologists) held in Ketchikan June 23-25, 1978, made some recommendation to the community.

These speakers generally held to the premise that no one can (or will) represent valid concerns Ketchikan residents have regarding various aspects of these proposed projects, better than the community itself. The specific steps which they suggested were that Ketchikan citizens:

1. Believe they can influence decisions and begin to come to some mutual decisions and goals consensus within the community.
2. Learn from other communities which have dealt with new, rapidly developing industries in their areas.
3. Decide what kind and amount of influence they want U.S. Borax to have on their community, and set about negotiating commitments from U.S. Borax to ensure compatible development.

4. Work with U.S. Borax and the relevant State and Federal agencies to make sure the concerns of Ketchikan are addressed.
5. Constantly monitor U.S. Borax and these agencies, perhaps by appointing an independent citizen's group with power to represent Ketchikan's wishes.
6. Decide what are acceptable trade-offs - social, economic, environmental-and define and determine mitigating measures.
7. Remember that they can't go back. Once a stream has been polluted, a town's economy has been rearranged to accomodate a new industry, and a social structure has been impacted by new and perhaps, a different type of people, life in Ketchikan will be permanently different.

Not only are these ideas pertinent to the citizens of Ketchikan, but they also suggest some attitudes and actions which the Forest Service could adopt.

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the U.S. Borax Quartz Hill Molybdenum Project in Southeast Alaska.
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B. PERSONAL INTERVIEWS:

Jack Shay	City Councilman, Manager of State Employment Office
Fran Boyd	Staff for IBEW
Bob Garza	Staff for IBEW
Bob Pickerell	Charter Boat Owner, Editor of the <u>New Alaskan</u>
O.W. Hanger	Manager of Northern Bus Company and Ketchikan Sightseeing
Dave Benson	Engineer with Chas. Poole and Associates
Ron Wendte	Restaurant owner and President of Ketchikan Chamber of Commerce
Sharon Newsome	Staff for Alaska Trollers Association, member of Tongass Conservation Society

C. SPEAKERS AT THE RESOURCE DEVELOPMENT CONFERENCE WERE:

Barry Gross	Mining Geologist	Conference Organizer
Gary Holthaus	Director	Alaska Humanities Forum
George Goldman	Economist	University of California
George Rodgers	Economist	University of Alaska, ISER
Mary Lou Kouch	Economist	Alaska Pacific Bank
Kevin McCarthy	Lawyer	Alaska Legal Services
Joe Meeker	Interdisciplinary Professor	Athasbascan University
York Wong	Political Economist	Evergreen State University
Raymond Gold	Historian	University of Montana
Derek Ellis	Biologist	University of Victoria
Lee Gorsuch	Director	University of Alaska, ISER
Phil Holdsworth	Consulting Geologist	
Gerald Bouck	Biologist	National Fisheries Research Center
John Goettl	Biologist	Fisheries Research Center, Colorado
Kit Kitasaki	Environmental Officer	U.S. Borax and Chemical Co.
Bill Rees	Biologist	Washington State Department of Fisheries

APPENDIX

Questions which were used as a guideline when interviewing Ketchikan residents.

ACCESS

1. Are you familiar with the proposed road which U.S. Borax plans to build in the Quartz Hill area? What were your main sources of information? (read EIS, newspaper articles, radio, etc.)
2. What is your general reaction to the road proposal? What is your general reaction to the idea of an expanded development, for the mine, at Quartz Hill?
3. Which of these statements best fits your viewpoint?
 - a. Supported the Forest Service decision to allow the road construction.
 - b. Would agree that access to the site is necessary but (at this time until the size and nature of the molybdenum deposit is determined) it should only be by helicopter. Would feel that way even if the Forest Service could prohibit access all together.
 - c. If the legal means of preventing it were available, would favor no provision for access (even helicopter).

MINE DEVELOPMENT

4. Would favor development even if exploration shows that the reserves would be marginally feasible to develop, since it would boost the Ketchikan economy? (Might need state and federal aid)(Independent of the timber industry economics).
5. Would favor the development even if not economically feasible to develop, if Ketchikan needed that boost to the economy if the wood products industry was faltering. (Perhaps because of Native or d-2 land allocations).
6. Would favor the development only if totally economically feasible (No Government subsidy).
7. Would favor only if 1)economically feasible, 2) environmental damage minimized, 2a) proper surveys done on present resources and potential impacts on those resources have been determines, 2b) more precise plans on the development have undergone public review, 2c) import land use allocations on the Tongass N.F. have been decised, and 3) the Ketchikan lifestyle was preserved.
8. Access - Do you feel that this development will benefit Ketchikan?
How?
Mine - Do you feel that this development will benefit Ketchikan?
How?
9. Do you know of any Ketchikan people working for U.S. Borax in the Quartz Hill area now? Do they like it?

10. Do you think that more local people will work there? Do you think that local people would have the necessary skill levels and be available to get jobs there?
11. Do you think the road could have harmful effects on Ketchikan (economy, social services, existing jobs)? Is it worth paying that price?
12. If it were shown that the road and/or mine could have significant detrimental effects on the fisheries resources in the Blossom/Wilson River drainages and/or the Keta River drainage, would that have an effect on your opinion?
13. If it were shown that most of the economic stimulus from the road and/or mine would primarily benefit other parts of the country, would that change your opinion on the desirability of the project?

U.S. FOREST SERVICE DECISION-MAKING

14. Was the Forest Service decision well founded?
15. Were all factors considered fairly? Was adequate information available?
16. Did all factions have access to the decision makers?
17. Did the Forest Service have the power to restrict the road development more than they did? Does Federal mining legislation tie the U.S. Forest Service's hands?

18. Having allowed the road construction, will it be harder for the Forest Service to regulate U.S. Borax later on? Have option been closed off?

19. Was it a good decision on the part of the Forest Service to separate the analysis and decision regarding the road from the analysis and decision regarding the road and mine?