

Prince William Sound: Five Economies in Turm(oil)

By Neal Fried and Holly Stinson

The Prince William Sound oil spill will be remembered first as an environmental disaster. But it will also mark the start of a new era in Prince William Sound's economic history.

Base Line Data Provides Preliminary Economic Observations

While it is premature to make any definitive conclusions about the economic effects of the spill, this is a good time to present base line data. From these data we will sketch the economy of Prince William Sound and arrive at some preliminary observations of the spill's short term economic impact.

Most of the economic repercussions of the spill won't be known for years. Therefore, this article can serve only as the first of many chapters of this saga.

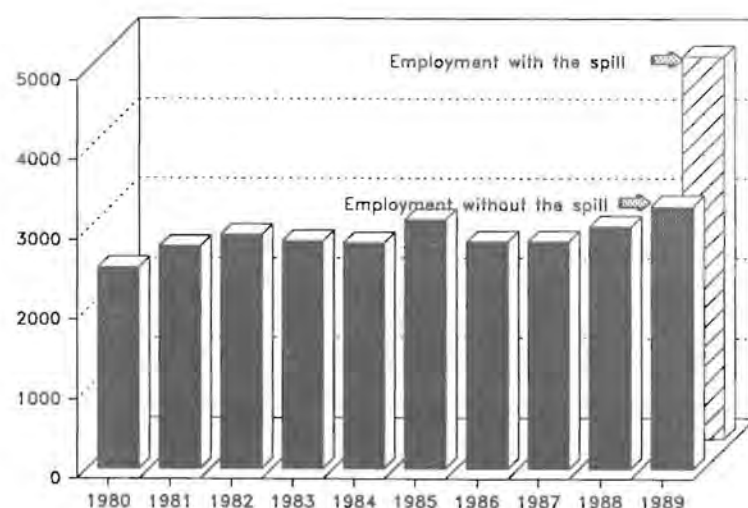
Although the spill has impacted the entire state, and although it has affected areas other than Prince William Sound (the Gulf of Alaska, Cook Inlet, and the Alaska Peninsula), the geographic focus of the article is limited to Prince William Sound.

Future Will Be Assessed By Biologists, Economists, Accountants

This discussion doesn't represent a cost/benefit analysis of the spill because the facts are not in yet. The true tally of costs and benefits is broad and long term. The total accounting covers more than just employment. The ledger won't be complete for many years. Eventually, though, teams of economists and biologists will itemize the costs and benefits with an accountant's precision. These costs and benefits will include the tangible (such as the loss of fisheries and the spill

See map of Prince William Sound on page 28.

Figure 1
Prince William Sound Employment - 1980-1989



Source: Alaska Department of Labor, Research & Analysis Section

cleanup wages), the semi-tangible (such as dead birds and otters), and the intangible.

The tangible costs and benefits are, of course, the easiest to price. The semi-tangible can be priced in a variety of ways — the value of a bird as food, or the value of that same bird as wildlife. The intangible costs are harder to assess. For example, what is the value to a New Yorker of having a pristine wilderness available in Alaska even if that person has never visited it? What is the value of the loss of spirit to the Sound's residents? These intangibles do have a cost. Eventually, as daunting a task as it will be, all costs will be measured.

The Sound's Economies Were Shaping Up Nicely in 1989

The forecast for Prince William Sound's economy for 1989 was good. Fishermen and processors anticipated record

salmon harvests and strong prices. The 1988 catch was valued at \$86 million, and 1989 was going to be even better.

The tour and charter operators anticipated a big season. A record number of cruise ships were going to be plying the Sound's waters this 1989 season. In 1988, 208,000 visitor days and 80,000 angler days were spent on the Sound. These numbers were expected to rise in 1989.

The Sound has also served as a summer playground for state railbelt residents (those who live in the Anchorage and Fairbanks areas). More than half of the state's population lives within 50 miles of the Sound. A recent survey conducted by the Alaska Department of Natural Resources found that 71% of the railbelt's population has visited either Cordova, Whittier or Valdez. As the Kenai Peninsula has become increasingly crowded, many visitors have turned to the Sound as the only nearby alternative for recreation.

Prince William Sound: Home To Five Communities, Many Economies

Prince William Sound doesn't have an integrated regional economy. Instead, it incorporates the two medium-sized economies of Valdez and Cordova, and the three small communities of Tatitlek, Chenega Bay and Whittier. Valdez is the only community in the Sound connected to the road system. The other communities, except Whittier, are accessible only by water or air. (Whittier is also accessible by rail.) The one important resource they all share is Prince William Sound.

Valdez's economy can be characterized as the most diversified of the Sound. It relies on government, transportation of oil, tourism, and fishing. Cordova, on the other hand, is as close as one can get to a 'mono' economy in Alaska. It's entirely dependent on the commercial fishery. Whittier is a transportation link and gateway to the Sound for Southcentral Alaskans. The economies of Tatitlek and Chenega Bay don't resemble those of the other three communities. Tatitlek and Chenega Bay almost totally rely on subsistence, with some cash earned from commercial fishing.

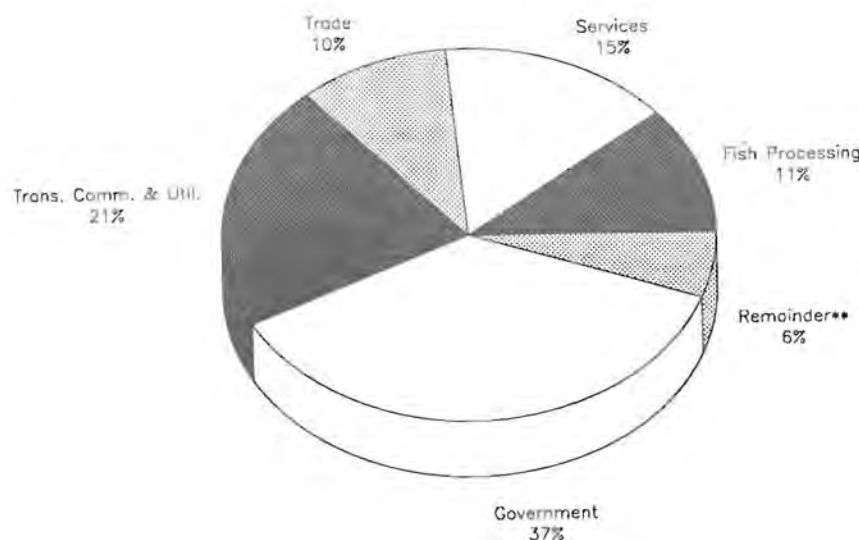
Spill's Impact on Each of the Five Local Economies Differs

The immediate and long term economic effects of the spill will be distinctly different for each of the five communities. As the logistics center for the oil spill cleanup, Valdez is feeling a dramatic rise in economic activity. With its population and work force doubling overnight, Valdez is Alaska's latest boom town.

Cordova, on the other hand, is described by some residents as deserted. Many local fishermen are out at sea trying to preserve their livelihoods by helping in the spill cleanup.

Because of the diversity of Valdez's economy, the long term consequences

Figure 2
Valdez Employment By Industry - 1988*



*Based on first three quarters.

**Remainder includes Finance, Insurance & Real Estate, Construction, Manufacturing other than fish processing

Source: Alaska Department of Labor, Research & Analysis Section

of the spill are less likely to be as severe on its economy than on the other four Sound towns. The economic singularity of the other communities makes them far more vulnerable to this environmental shock.

Sound's 1989 Oil Spill Payroll Could Top \$100 Million

Although it's difficult to pin down the present size of the Prince William Sound oil spill work force (let alone the future size of the work force), some estimates and conservative projections have been made. (See Figure 1, page 1.) It is assumed that the oil spill work force will stand at approximately 3,000 for five months. (This figure excludes government workers and fishermen leasing their boats.) Without the oil spill work force, the Sound's 1989 annual average would have amounted to roughly 3,300. With the addition of the oil spill workers, the Sound's 1989 annual average wage and salary employment may sum to 4,600. (Not taken into account in this figure are any employment changes in the fisheries and tourism industries. Also not taken into account are the secondary impacts of the oil spill work force.)

The 1989 payroll of the oil spill workers could exceed \$100 million, a payroll which is greater than that earned by the Sound's entire pre-spill work force. Above average hourly wages and long hours push these payroll figures skyward. Since a substantial part of this work force comes from elsewhere in the state and the country, much of this additional economic activity will leak straight out of the area economy.

Valdez: A Profile

Unlike most of Alaska's coastal communities, fishing hasn't played a major role in Valdez's economic history. Founded in 1899, Valdez was a jumping off point for miners heading north in search of gold. The devastation of the 1964 earthquake brought on a flurry of activity as the entire town relocated to its present site. Then, two state agencies

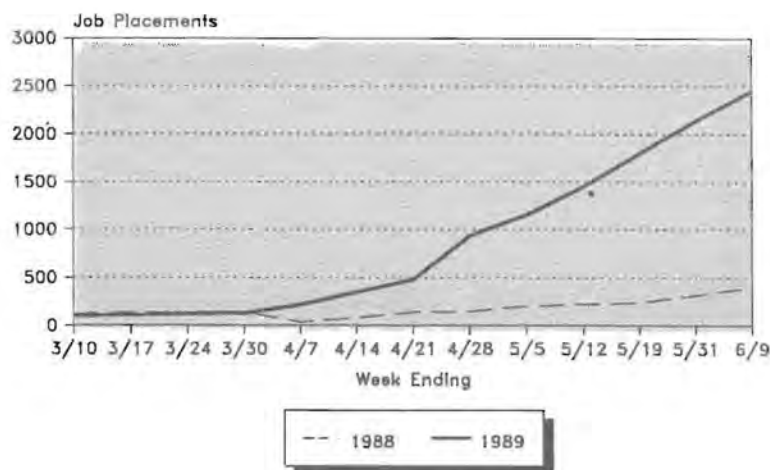
located there — an institution for persons with developmental disabilities, and a regional highway office. As a result, the Valdez economy became almost completely dependent on state government. The city's economic complexion changed little until the mid-1970s when construction began on the Trans-Alaska Pipeline System (TAPS).

Deja Vu for Valdez

The situation in which Valdez finds itself today is in some ways comparable to the community's TAPS experience. In the mid-1970s, Valdez was host to one of the largest Trans-Alaska Pipeline construction camps. Housed in Valdez were two work forces: one for the construction of a section of the pipeline, and another for the construction of the oil terminal. In 1974, the city's entire population amounted to 1,350. One year later, twice that many men and women were living at the terminal construction camp alone; the community's total population swelled to 6,512 that year.

Figure 3

Valdez Employment Center Job Activity - 1988-1989



Source: Alaska Department of Labor, Research & Analysis Section

Employment had more than tripled. Per capita income had more than doubled.

With the completion of the pipeline and oil terminal in 1977, employment fell by more than 50% in Valdez. But the oil industry left the city with a much larger tax base. Today, Valdez's per capita tax base is nearly 5 1/2 times the statewide average (\$395,315 vs. \$73,354).

These added revenues have enabled the City of Valdez to provide additional services, to build needed infrastructure, and to embark on ambitious economic diversification efforts. Of the three undertakings, what has stood out most has been the effort to diversify the economy. The city financed the construction of terminals to transship grains from the Interior. The city also had built a civic center to attract more visitors. Further, the city had built a \$48 million cargo and container port

facility to transform Valdez into the Interior's major port of entry. Funding for these projects came from local resources. Much of this ambitious development began as the rest of the state's economy languished in a post-pipeline construction slump.

By 1980, the statewide economy came out of its slump and moved into high gear for the next five years. State petro dollars were being spent in increasing amounts. Valdez was largely bypassed by this boom. During this era, statewide employment grew 33%, whereas Valdez employment grew by a mere 5%. (See Table 2, page 5.) Valdez didn't share in the state's boom mainly because it had already built its necessary infrastructure and was providing the services it believed it needed. But smaller, more subtle things were happening in the Valdez economy.

Valdez Diversification Efforts Have Seen Success

Tourism expanded on all fronts. A growing number of visitors arrived in Valdez by air, water and road. They usually came to Valdez to access Prince William Sound. By 1985, visitors were spending \$10.1 million a year in Valdez. It was the seventh most popular visitor destination in the state that year. Hotels were full during summer months. The state's summer ferry was usually booked to capacity. Charter operators expanded their hunting and fishing trips, as well as their glacier viewing trips.

Cruise ships arriving in 1987 provided a considerable economic boost. That year 15,000 visitors disembarked from these ships; each of these visitors spent an average of \$50 per day. In 1988, more than 100,000 visitors set foot in

Table 1

Prince William Sound Wage & Salary Employment - 1980-1988*

	1980	1981	1982	1983	1984	1985	1986	1987	9 mo. Avg. 1987	9 mo. Avg. 1988
Nonag. Wage & Salary	2,849	3,100	3,233	3,143	3,053	3,138	2,855	2,860	2,946	3,243
Mining	**	**	**	**	**	**	**	**	**	**
Construction	243	218	211	144	189	148	84	52	55	56
Manufacturing	298	392	349	381	347	524	455	457	541	666
Trans., Comm. & Utilities	568	673	765	722	645	499	448	463	465	494
Trade	**	291	372	368	348	362	309	331	333	373
Wholesale	**	17	40	40	38	47	42	45	49	44
Retail	238	275	332	328	310	316	268	286	284	328
Finance, Ins. & Real Estate	70	53	47	44	46	45	44	44	45	40
Services	390	332	405	377	385	396	395	402	411	452
Government	962	989	1,034	1,058	1,054	1,123	1,072	1,049	1,032	1,064
Federal	61	67	66	55	54	46	44	47	47	54
State	432	419	436	427	455	506	493	469	466	476
Local	470	503	533	577	545	572	535	533	518	535
Miscellaneous	**	**	**	**	**	**	**	**	**	**

* Only the first three quarters of 1988 data are available

** Nondisclosable

Source: Alaska Department of Labor, Research & Analysis Section

the community, according to estimates provided by the Valdez Convention and Visitor Bureau. From all indications, the numbers would only grow.

Fisheries A Small, But Growing Portion of Valdez Economy

While tourism has grown, the fishery in Valdez is considerably smaller than elsewhere in Prince William Sound. Fish harvesting represents a tiny portion of the Valdez economy. (See Figure 2, page 2.) Only 57 out of 485 Prince William Sound residents who held permits and fished in 1986 lived in Valdez. (See Table 4, page 8.)

Fish processing is also a small Valdez industry, but it's growing. In 1980, there were fewer than 10 annual jobs in Valdez's fish processing industry. By 1981, however, three processors were operating shore-based plants. By

1985 annual employment grew to 164. And in 1988, seafood processing employment rose again.

1989 Economy Was Looking Good for Valdez

The growth of tourism and the fisheries helped cushion Valdez employment during the statewide recession of 1986-88. In addition, recent statistics have indicated an economy that has been swinging upwards. Employment in fishing, and in the trade and services industries (the latter two being major beneficiaries of tourism) rose in 1988. Valdez's 1988 economy provided a firm underpinning for the economy of 1989.

Table 2

Valdez Wage & Salary Employment - 1980-1988*

	1980	1981	1982	1983	1984	1985	1986	1987	9 mo. Avg. 1987	9 mo. Avg. 1988
Nonag. Wage & Salary	1,746	1,848	1,884	1,822	1,906	1,850	1,696	1,712	1,759	1,831
Mining	**	**	**	**	**	**	**	**	**	**
Construction	226	196	181	116	153	112	59	39	43	36
Manufacturing	**	**	70	85	155	171	186	200	247	231
Trans. Comm. & Utilities	449	488	504	481	456	416	373	374	375	393
Trade	105	135	146	157	161	155	121	144	143	183
Finance, Ins. & Real Estate	**	**	**	**	**	**	**	**	**	**
Services & Miscellaneous	242	207	257	218	233	251	253	264	271	303
Government	680	698	704	745	730	725	686	674	663	670
Federal	18	17	20	15	17	15	14	16	16	17
State	404	404	392	403	413	399	386	371	371	376
Local	259	277	292	327	300	311	286	288	276	276

* Only the first three quarters of 1988 data are available

** Nondisclosable

Source: Alaska Department of Labor, Research & Analysis Section

The Spill Caused Valdez Employment To Double In One Month

But a steady upswing was not to be in Valdez. Instead of 1989 employment growing 5% or 10%, it doubled in one short month. Before the spill Valdez's wage and salary work force stood at about 1,700. By the second week of the spill there were more than that many in Valdez working on the spill alone. Within two weeks of the spill, City of Valdez estimates placed the city's population at about 6,600, double its pre-spill population. Although the numbers will probably not grow as great as they had during the construction of TAPs, they have climbed more rapidly. All the ingredients of a classic Alaska boom have been set into place.

Money Talks; Thousands of Eager Cleanup Workers Arrive

Although Valdez's work force almost doubled in two weeks, there was no

shortage of people to fill the oil spill jobs. In March, there were 22,000 unemployed Alaskans, and there were probably many more marginally employed and low paid in that same month. The promise of high wages for unskilled work turned Valdez into the employment mecca of the state and, to a lesser extent, the nation. The news media provided the largest help wanted sign Alaska had ever secured.

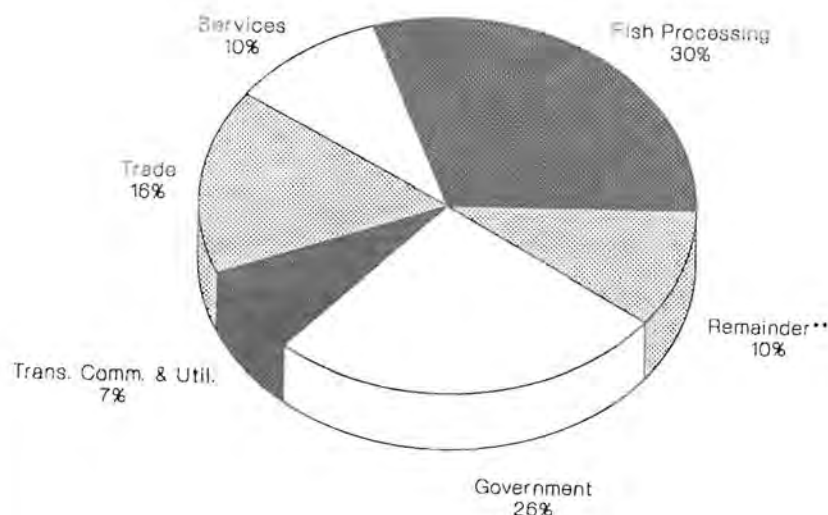
It's no wonder the response was so great, what with base wages set at \$16.69 for 7-day, 12-hour shifts. (That could add up to a weekly paycheck of \$1,800. The average Alaskan's monthly wage in 1987 was \$2,308.) With the state just coming off a three-year recession, there have been plenty of potential oil spill workers eager to go to work.

During the first 10 weeks of the spill, the Valdez Job Service dispatched 2,447 workers. That's more than a 500% increase in placements over the same period in 1988. (See Figure 3, page 3.) This makes it the busiest Job Service office in the state. During the first six weeks, the two primary cleanup contractors, VECO and Norcon, hired a total of 1,517 clean up workers in Valdez.^{1/2} The Coast Guard contingent rose from 46 in pre-spill Valdez to 150. Alaska Department of Environmental Conservation staff levels grew from 1-3 to 50.

The Number of Valdez Jobless May Rise

One irony of the creation of this instant work force is that Valdez's

Figure 4
Cordova Employment By Industry - 1988*



*Based on first three quarters.

**Remainder includes Finance, Insurance & Real Estate and Construction

Source: Alaska Department of Labor, Research & Analysis Section

^{1/} Some of the Veco workers were dispatched out of the Job Service Office.

^{2/} The Veco and Norcon hires exclude Exxon employees, other contract personnel, skippers and first mates of leased fishing boats, and federal, state and local government employees.

unemployment rate may rise. This development can be attributed to the large number of job searchers who swarmed into Valdez. Despite the fact that the number of mobilized oil spill workers is greater than the entire pre-spill Valdez work force, more than 1,200 hopeful job searchers remain on the Alaska Job Service spill cleanup list. The number of spill cleanup job searchers simply grew faster than the number of jobs. That usually translates into a higher unemployment rate. Further, because the surge happened so quickly, the statistics may never catch up with this incredible overnight transformation in the local labor market.

Valdez Employers Finding It Difficult To Hire and Keep Workers

It's also ironic that many Valdez employers have found it difficult to fill jobs, even though most of the spill cleanup job searchers are without work. Local businesses' demand for workers has grown because the spill has

generated more business. Some businesses have lost employees to the cleanup. Many businesses have not only lost employees to the cleanup, but cannot fill vacant positions. Many job searchers are reluctant to accept these comparatively low paying jobs because they want to remain available for an opening in the spill cleanup operation. Most didn't travel to Valdez to find a low paying job. Those jobs they could have found at home.

A survey conducted for this article one month after the spill found that more than half of Prince William Sound employers believe they will experience worker shortages during the spill. While the Valdez Job Service has filled many local job openings, turnover remains extremely high. Soon after employees accept a job from a Valdez business, they quit after having been offered a higher paying spill cleanup job.

Local businesses' shortage of help has become critical enough that Exxon began providing 'recruitment assistance' in mid-June for some Valdez

employers. Exxon is recruiting in Anchorage and Fairbanks via state Job Service offices for specific, unfilled job openings that are occurring in Valdez. Exxon is also providing daily bus service to Valdez from these two cities. Further, they are providing housing for those willing to work in these nondirect spill jobs.

Valdez Businesses Speak: Jobs Available, But Few Workers

A telephone survey conducted in Cordova and Valdez April 20 and 21 asked two principal questions of 33% of all firms employing more than one person: 1) Have you hired any additional workers because of spill related activity?, and 2) Has the spill had a noticeable effect (other than employment) on your business? Other broader questions on long term impacts were also asked. (It's important to remember that because the situation there is so fluid, the survey provides only a snapshot in time.) Here are the responses:

Table 3

Cordova Wage & Salary Employment - 1980-1988*

	1980	1981	1982	1983	1984	1985	1986	1987	9 mo. Avg. 1987	9 mo. Avg. 1988
Total	808	952	1,001	1,031	877	1,024	902	918	945	1,142
Construction	**	**	**	**	**	**	**	**	**	**
Manufacturing	175	219	178	216	113	262	181	197	224	344
Transportation	37	81	88	93	89	78	70	79	76	85
Trade	140	143	207	194	173	194	174	181	183	183
Finance, Ins. & Real Estate	25	26	24	23	23	25	25	26	26	25
Services	111	104	122	124	113	102	103	96	100	116
Miscellaneous	**	**	**	**	**	**	**	**	**	**
Government	282	308	316	319	305	300	291	282	277	298
Federal	35	42	37	34	32	30	30	31	31	37
State	81	87	87	88	92	96	96	89	86	90
Local	167	179	192	197	181	174	166	162	160	170

* Only the first three quarters of 1988 data are available

** Nondisclosable

Source: Alaska Department of Labor, Research & Analysis Section

Twenty-four of Valdez's 74 private sector firms were surveyed. Of these, only 21% had hired additional workers. However, 88% of the firms felt the spill had affected their business. Some of these firms didn't hire additional workers because they couldn't find any. Other firms simply increased the hours their current employees worked. There were a few firms which actually experienced a decline in business. These losses were nearly all a result of a herring fishery cancelled in April.

More than half of the business operators surveyed in Valdez said that they worry about finding enough workers in the near future. Although a majority of the firms have experienced a rise in business, more operators predicted that the long term effects on their business would be negative rather than positive (33% vs. 21%). The largest number (38%) predicted there would be no long term effect. Although most business operators answered this question, the majority were ultimately uncertain about the future.

Valdez Fish Processors Concerned About Possible Lack of Workers

A number of Prince William Sound employers are extremely worried that a shortage of workers will haunt them this summer. Most concerned are the fish processors who rely on a large seasonal work force for the frenzied salmon season. For the sake of comparison, it was tenuous at best during last season's fish harvest — when there was no cleanup to compete with — for processors to find an adequate labor force. This year's harvest is expected to be much larger.

Although the Valdez fish processing industry accounts for about 200 jobs annually, as many as 1,300 different individuals may fill these jobs because of high turnover. For some processors this season looks almost hopeless, perhaps devastating, if they cannot hire enough workers. Much will depend upon three factors: Whether enough college students and seasonal migrants will show up for work, how many of the unsuccessful candidates for spill cleanup work will take processing jobs, and the amount of the actual harvest.

Housing Crunch Seen If Tourists Do Arrive

Significant displacement could also occur for the tourism industry. Growing reports of cancellations and slower-than-usual bookings may be the least of this industry's problems in 1989. If visitors do arrive in significant numbers there is concern about where they will stay. Some operators of Prince William Sound hotels and recreational vehicle parks say they will ask those oil spill workers who are presently staying in their facilities to leave when tourists begin to arrive. Meanwhile, Valdez city officials are expanding campgrounds.

It has taken Valdez community leaders a long time to develop a thriving visitor industry. It's possible that nearly all the gains could be undone in one season. Reputation and word of mouth are the most powerful forces in this industry. Although immediate concerns relate to this year's visitors, the real worry is not linked to this season, but how the spill might affect future seasons.

The Rosy Picture for Valdez:

So what does all this add up to for Valdez? There is little doubt that Valdez will experience a net gain in economic activity in 1989. Total wages, profits and income will skyrocket. This gain will be partly offset by the increased costs linked to crime and congestion. The 1990 picture is hazy. Because spill cleanup activity may run over into 1990, there is a good chance that it too will go down as another year with a net gain over pre-oil spill economic activity. However, higher unemployment is almost inevitable since a large share of the oil spill work force will be laid off in late 1989 and may not be rehired in 1990. Many laid off workers will leave Valdez. But those who remain may be counted on the unemployed side of the labor force equation.

Table 4

Number of Commercial Fishers Claiming Residence in Prince William Sound

	1980	1981	1982	1983	1984	1985	1986
Cordova	418	430	430	465	406	410	399
Valdez	53	61	58	55	55	60	57
Chenega Bay	0	0	0	0	1	2	2
Tatitlek	9	8	9	8	10	9	8
Whittier	5	11	12	18	16	8	13
TOTAL	485	510	509	546	488	489	479

Source: Alaska Commercial Fisheries Entry Commission

In the long run it is conceivable that Valdez may experience a net gain in employment if it becomes home to a large research facility and oil spill response team. Both the Alaska Departments of Fish & Game and Environmental Conservation are creating semipermanent divisions to monitor and study the spill's long term effects. Meanwhile, if the tourism industry and the fisheries recover, Valdez's economy may continue to move forward. This is, of course, the rosier picture possible.

The Not So Rosy Picture:

On the other hand, Valdez has plenty to lose. Valdez could lose the forward momentum that it has developed in its tourism and commercial fishing industries. It has been a long, painstaking undertaking for community leaders to cultivate these industries. Diversifying a community's economy is always a long term undertaking. The spill may have undone all this work overnight.

Cordova, Greatly Reliant on Fishing, Has More To Lose

Unlike Valdez, Cordova hasn't been inundated by people since Good Friday 1989. If anything, this town of 2,000 has lost population. The few who came to Cordova to deal with the spill haven't replaced the many who left earlier for nearby spill related work — cleanup and protection of fragile streams and coves. Protection from oil contamination is a major priority because Cordova's economy is unlike Valdez's relatively diversified economy. Instead, Cordova's economy consists solely of fishing. Town residents' 1987 estimated gross earnings from fish caught in Prince William Sound alone was over \$38 million.

Since the spill, many residents have expressed concern about Cordova being a ghost town if it lacks a healthy fishery. These same sentiments were expressed in the early 1970s by Cordova residents

who went so far as to file a lawsuit in a failed attempt to stop the pipeline terminal from being located at Valdez. Today, their worst fears have come true.

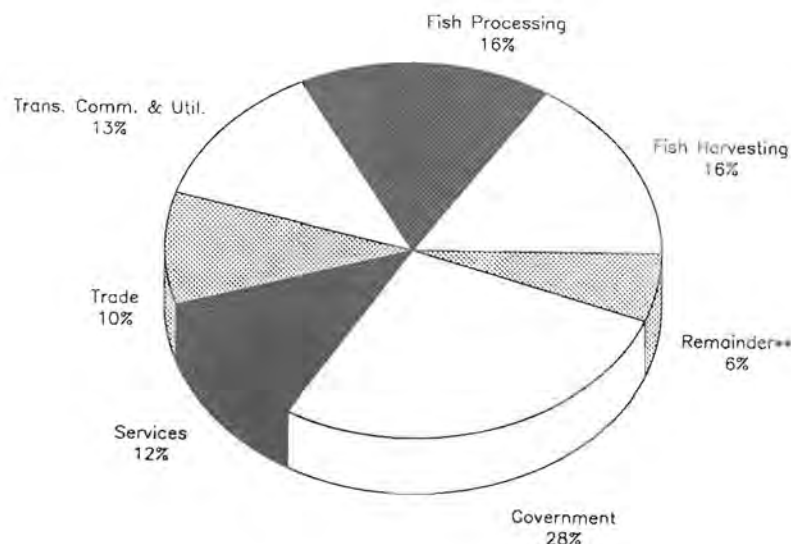
Cordova was founded early this century by people hoping to harvest and ship the area's coal and oil resources. The coastal community thrived through the 1930s from the copper that came by rail from the Kennecott mines. There has been some fishing activity since Cordova's first beginnings, but not to the same extent of present day activity. It wasn't until the copper mines shut down in 1938 that both the fish harvesting and fish processing industries began to dominate Cordova's economy. Today, fishing is what Cordova is about.

Fisheries Dominate Cordova's Economy

Why does fishing dominate Cordova? Each year the nearby Copper River hosts a huge run of red salmon and a

Figure 5

Prince William Sound Employment By Industry - 1988*



*Based on first three quarters; fish harvesting employment is 1983 estimate.

**Remainder includes Finance, Insurance & Real Estate and Construction and Manufacturing other than fish processing.

Source: Alaska Department of Labor, Research & Analysis Section

smaller run of silvers. The nearby Bering River also carries a sizeable salmon run. Cordova's proximity to these two rivers makes the town a logical choice for canneries. In the 1940s, Cordova's two canneries processed dungeness crab, razor clams, and salmon. But in recent times, salmon canning has been the mainstay of the local processing industry.

Since the 1964 earthquake, Cordova has been expanding its fish harvesting and processing facilities. Two large processors now operate in a new industrial park. A large scale tanner crab processing operation now operates from a site developed in the 1970s. And an enlarged fishing fleet is now docked in a harbor whose size was doubled in 1983.

Expansion of Cordova facilities has occurred gradually. In contrast to Valdez, Cordova hasn't experienced boom periods. Cordova's population and employment have remained steady, with jobs during the 1980s hovering close to 1,000 each year. (See Table 3, page 7.) Any economic change for Cordova has shadowed changes in the fisheries.

Today, Cordova's five canneries process bottomfish, halibut, shellfish, and salmon. With the processing of all these species, fishery employment has become much less seasonal. Processing employment still peaks during summer months, though. In 1988, seafood processing jobs accounted for almost one-third of all wage and salary

employment in Cordova. (See Figure 4, page 6.) During each year's third quarter (July, August, September), this share climbs to nearly one-half of all jobs.

According to the Alaska Commercial Fisheries Entry Commission, 400 Cordova residents fished in 1986 (though not necessarily in Prince William Sound). (See Table 4, page 8.) This means that 20% of all Cordova residents participated in the fish harvest that year. If annualized fish harvest jobs were added to the Alaska

^{3/} Alaska Department of Labor employment figures exclude fish harvesters.

Table 5

Catch & Value* of Prince William Sound Commercial Fisheries (Value in thousands of dollars)

Fishery	1985		1986		1987		1988**	
	Catch	Value	Catch	Value	Catch	Value	Catch	Value
Herring (in metric tons)	8,283	\$5,800	11,318	\$8,400	7,407	\$6,200	11,923	\$12,250
Crab (in thousand lbs.)	1,059	1,300	1,691	1,980	1,533	2,270	1,125	1,770
Shrimp (in thousand lbs.)	680	920	489	880	321	720	278	680
Salmon (in thousand fish)	28,945	48,467	14,848	29,400	33,104	67,500	14,855	70,640
Halibut (in thousand lbs.)	324	260	446	600	448	660	423	480
Sablefish (in metric tons)	174	n/a	86	213	93	180	92	190
Prince William Sound Total Value		\$56,747		\$41,473		\$77,530		\$86,010

* Estimated ex-vessel value (excludes post-season adjustments)

** Preliminary estimates

Sources: Alaska Department of Fish & Game and International Pacific Halibut Commission

Department of Labor's total wage and salary employment for Cordova,³ the town's fishery (those in harvesting and processing jobs) would account for one-third of total employment in the Prince William Sound area. (See Figure 5, page 9.)

Is fishing the whole story in Cordova? Almost. The trade and services sectors both rely heavily on the fishery.

Sixteen companies in the trade and services sectors were recently surveyed for this article. Without exception, operators of all 16 firms said their businesses rely heavily on the health of the local fishery. Some even opined that there would be no town of Cordova without fishing.

Tourism A Small Player in Cordova

Tourism is a very small player in Cordova's economic scene. Without road access, Cordova doesn't experience a large influx of highway travelers like Valdez. The sole highway is the Alaska Marine Highway. State-run ferry traffic has remained fairly steady through the 1980s. Unlike Valdez, no cruise ships stop in Cordova. Most visitors are independent travelers who are in the area to hunt or fish.

Government Offers 1 in 4 Cordova Jobs

Government jobs are the only other significant source of Cordova employment, accounting for one of every four Cordova jobs. The federal presence includes the Coast Guard, U.S. Forest Service, and the Federal Aviation Administration. The state maintains a local fish & game office and a university-sponsored marine advisory program.

Local government jobs account for about half of all government sector jobs in the town. City revenues funding these jobs

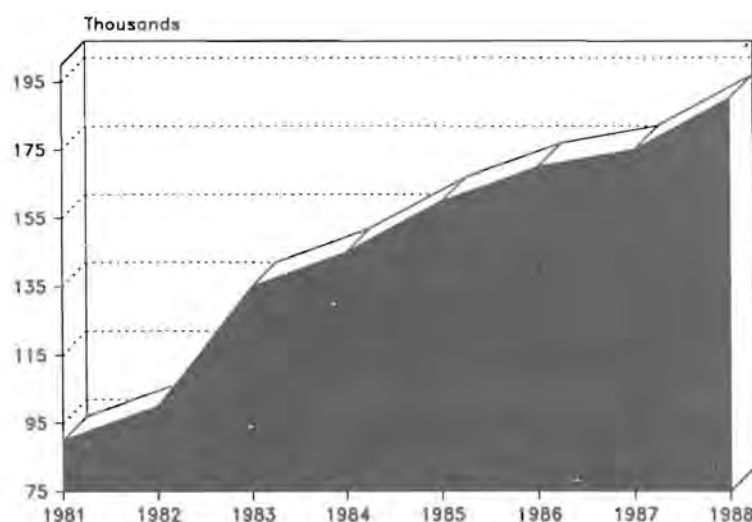
come from various sources. But it's estimated that one-third to one-half of all city revenues come directly from the fishery. A local sales tax has remained surprisingly steady in the 1980s, bringing in just over \$1 million per year.

Although mining spurred Cordova's early growth, presently there are no jobs in this sector. There is talk of production at the Katalla oilfields and the Bering River coalfields. But if one of these projects were to develop, its biggest impact on Cordova would be in lower fuel costs for electricity generation, not in additional employment.

Cordova Businesses Don't Foresee Any Long Term Positive Impact

As mentioned before, the employment survey conducted for this article found business booming in Valdez and lagging in Cordova. No one surveyed in Cordova foresaw any long term positive impact

Alaska Railroad Passenger Traffic Portage/Whittier - 1988



Source: Alaska Railroad Corporation

Figure 6

on their business. Of the 23 firms contacted in Cordova, only one, a publishing shop, had experienced increased business.

Lower Paying Jobs Go Begging

Yet even without much business traffic, Cordova's Main Street is lined with help wanted signs. By early May, about 275 residents signed on with the cleanup contractors. One hundred more are on the waiting list. As in Valdez, many of the jobless are reluctant to take a lower paying job while a potential higher paying one might await them. This inflationary pressure may force upwards local wages. It's possible that employers may be left with a more permanent increase in the cost of doing business because wages don't usually fall as rapidly as they rise.

Besides the question of wages, the biggest worry once again is availability of workers, no matter the price. One large seafood processor seems assured

of an adequate supply of workers. But others are concerned that there won't be enough people to process this summer's catch.

Availability of Tenders for the '89 Harvest a Worry

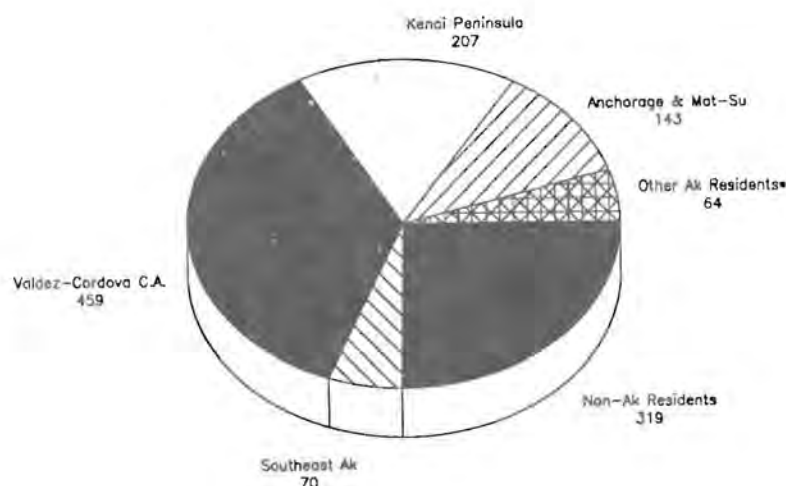
There is also concern over the availability of tenders which transport the fish to shore. Owners of tenders may choose to retain lucrative contracts in the spill cleanup operation. To date, the cleanup contractors have leased over 100 Cordova-based fishing boats, along with their skippers and first mates. They, too, may opt this summer for the steady income of a cleanup contract.

Local fishermen may recoup some lost fishing income—or even enhance their income — by leasing their boats for spill cleanup activities. But local businesses which rely on selling fishing gear, bait and supplies have already lost much of their revenue this spring. Fishers have cancelled orders for new equipment. Restaurants and hotels aren't seeing the usual crowds of fishers returning from the harvest with money to spend. Today, Cordova businesses are just holding on to see if any other fisheries are closed this season. The general lack of confidence in the Cordova economy is countered by hope that the season may remain open.

Possibly the only growth industry in Cordova's near future may be in marine research. A new division of the Alaska Department of Fish & Game is already functioning in Cordova to assess the oil spill impact. Its staff, composed of 24 state and 4 federal workers, will remain in Cordova for several months before relocating to Anchorage to complete the assessment.

Valdez and Cordova are the two largest communities in the Sound. They have both felt the impact of the spill, albeit in different ways.

Figure 7
Commercial Fish Harvesters in Prince William Sound — By Residency, 1987 Season



*Other Alaska Residents include those living in Kodiak, Fairbanks/Interior, Southeast, Bristol Bay and the Aleutians.

Source: Alaska Department of Labor, Research & Analysis Section

Whittier Will Be Least Affected by the Spill

Government and transportation are the sources of most jobs in Whittier. A small port town on Prince William Sound, it is connected by railroad to the Seward Highway and Anchorage. During the 1980s, the number of people traveling to and from Whittier by rail rose greatly. (See Figure 6, page 11.) Tens of thousands of people pass through Whittier yearly, but few stay. The town serves as a gateway to tourism and recreation in the Sound, but it is rarely a destination. Of the Sound's five settlements, Whittier will be least affected by the oil spill.

Tatitlek & Chenega Bay: Fear for the Future of a Native Lifestyle

The Tatitlek and Chenega Bay fisheries may suffer a smaller impact than the two larger communities, but the impact will be no less important. Residents of these two sparsely populated native villages rely on subsistence for their way of life. They depend on fish, marine mammals, and land animals for their main sources of food.

The only cash jobs in these villages have been derived from commercial fishing. There is now doubt about the future of the subsistence and commercial fisheries. The cleanup contractors have hired all available villages residents for work on the spill. For now, these two towns currently enjoy a fully employed labor force. Any resident wanting to work for cash is doing just that. But if the spill ruins their subsistence livelihood, these cleanup paychecks may be their only harvest in the near future. Today's zero unemployment rate won't last long. Eventually, the residents of these villages will return to their reliance on subsistence.

Sound's Salmon Catch Makes Up 10-to-20% of State's Total

Of course, residents of the Sound's five communities are not the only harvesters of its abundant fisheries. (See Figure 7, page 12.) In order to gauge what could potentially be lost because of the spill, it's necessary to see what the fisheries looked like before Good Friday.

Table 5 (on page 10) presents the total recent years' catch and value of the Prince William Sound fisheries (as estimated by the Alaska Department of Fish & Game [ADF&G]). The Prince William Sound region (ADF&G's Area E) covers the Sound itself, and areas adjacent to the Bering and Copper Rivers, commonly referred to as 'The Flats'. Table 5 estimates fish value received by fishers (not the wholesale value), and excludes any postseason adjustments often made by processors.

Salmon clearly dominate the Sound's fisheries, accounting for anywhere from less than 10% to nearly 20% of the state's total salmon catch. (See Table 6 on page 14.) The Copper River's early run of red salmon is famous for commanding premium prices. But the pinks are the Sound's most important run in terms of poundage and total value. The 1987 run was unusually large; almost 30 million pinks were harvested. This year, the fry from that record run are returning as adults. An all-time record number of pinks are forecast to be harvested this year, along with a strong return of hatchery-raised pink salmon.

The Sound's five hatcheries' harvests are also included in Table 6. Although aquaculture remains a controversial subject, few deny that the Sound's hatcheries are making a difference in the number of fish made available for harvest. For example, hatchery pinks accounted in 1988 for over 90% of the total pink salmon harvest (since the predicted return of wild stocks never materialized). A record financial harvest occurred in 1988 despite dismal wild stock returns (because prices rose to three times the prior year's level).

Table 6

Catch & Value of Prince William Sound Commercial Salmon Harvest*

(Number of fish, and value in thousands)

	Chinook (king)	Sockeye (red)	Coho (silver)	Pink (humpy)	Chum (dog)	PWS Total	State Total	PWS as % of State Total
1985 Catch	44	1,450	1,025	25,129	1,297	28,945	146,845	19.71
Value						\$48,467	\$389,637	12.44
1986 Catch	42	1,289	426	11,391	1,700	14,848	127,864	11.61
Value						\$29,400	\$413,648	7.11
1987 Catch	42	1,738	175	29,230	1,919	33,104	96,432	34.33
Value						\$67,500	\$478,028	14.12
1988 Catch	32	768	478	11,736	1,841	14,855	99,371	14.95
Value	\$2,540	\$13,730	\$9,190	\$33,240	\$11,940	\$70,640	\$741,500	9.53
1989 Catch (forecast)	42	1,314.00	440	46,000.00	1,149.0	48,945	126,964	38.55

* Includes Bering & Copper rivers, Coghill, Unakwik & Eshamy districts, hatcheries and general purse seine.

Estimated ex-vessel value (excludes post-season adjustments).

Source: Alaska Department of Fish & Game

1988 Herring Fishery: \$12 Million; 1989 Herring Fishery: \$?

Another 1988 Prince William Sound seafood harvest includes over \$12 million in herring and herring roe. This fishery has come a long way since 1951 when a study referred to herring roe as a waste product.

However, this spring's four herring fisheries were closed due to the spill, and next fall's herring opening for bait is questionable. Likewise, the sablefish and pot shrimp fisheries were closed due to the spill.

Crab fisheries include tanner, king and dungeness. Depressed stocks kept this January's tanner crab fishery from opening. As elsewhere in Alaska during

the 1980s, Prince William Sound crab stocks have been much lower than those of the prior decade. As is made evident in Table 5 (on page 10), though, these herring, sablefish, shrimp and crab fisheries have played a minor role in the Sound's overall fishing scene.

Two State Agencies Will Ensure No Oiled Fish Will Go To Market

Closure of the shellfish, groundfish and herring fisheries will certainly mean lost income to many people. The biggest economic loss in the fisheries, though, would be felt if any future salmon seasons aren't opened.

There are two separate issues at stake here. The first is whether the salmon,

adults and fry, will avoid oil contamination. The second is whether consumers will perceive Alaska salmon as being tainted. The first issue was partly answered May 15 when the Copper River Flats area opened to commercial salmon fishing. That day's catch was more than twice that of last year's opening day, despite fewer harvesting boats, tenders and crews. Further, the salmon, according to ADF&G and Department of Environmental Conservation (DEC) officials, were not contaminated by oil. ADF&G and DEC, which have formed a joint 'Interagency Prince William Sound Seafood Quality Assessment Group', is continuing to ensure that no oiled salmon are processed.

The second issue, i.e., the issue surrounding consumers' perception, is no less serious than the first. While a can of Alaska salmon with an oily taste doesn't present the same danger that a can of Alaska salmon with botulism did in 1982, the effect on prices could be similar. The average 1982 price paid for Prince William Sound pink salmon dropped to half of the 1981 level. The catch fluctuated during the next few years, but the price didn't. Pinks caught in 1987 still went for less than they did in 1981. Major efforts are underway now to prevent this same scenario from occurring again.

No Salmon Fishery Will Open If Oil Is Nearby

In the Sound itself, no fishery will be opened in any area where there is oil on the water. Further, no fishery located adjacent to beaches contaminated by oil will be opened. These closures could mean that up to 50% of the Sound's water area will be closed to salmon harvesting this season. Most of the wild stocks, though, are expected to return to nonoiled waters. Operators of hatcheries in the Sound are 'guardedly optimistic' about this year's harvest. So this season's catch may be salvaged.

So far, one small setnet fishery in the Sound has been cancelled. The fate of other salmon fisheries, as of the printing

of this article, is unknown.

And if there are salmon openings in the Sound will workers be there to harvest them? Four scenarios exist for fishers. Some may opt to dock their boats for the season. Some may choose not to fish, but lease their boat for spill cleanup work. Others may fish elsewhere. And some may choose to fish Prince William Sound assuming there will be openings. Those salmon fishers who hold a permit for Area E can only fish that area. But any fisher holding more than one permit may opt to fish another area instead of Prince William Sound. Those who hold statewide permits for the harvest of other species may choose to fish elsewhere.

The Fisheries Beyond 1989: An Unanswerable Question For Now

Questions regarding the health and availability of future salmon stocks won't be answered for several years. Many of the pink and chum salmon spawn intertidally. Eggs deposited on oiled beaches this season may not survive. This will affect the pink salmon harvest two years from now, as well as the harvest of other species in later years. Fry were released, as scheduled, in April and May from the Sound's hatcheries. So far there has been no evidence of dead fry. It remains to be seen whether wild salmon stocks will be as lucky.

Shellfish inhabit deeper waters than salmon. Their harvest in Prince William Sound is much smaller than salmon. It is in March through June when shellfish release their eggs. Once released, these eggs float up near the water's surface. They will most likely die if exposed to oil. These considerations leave in doubt the future of the Sound's shellfish harvests. Herring spawn of 1989, too, are expected to be heavily impacted by the spill, say state biologists.

The oil spill's impact on the Prince William Sound fisheries is already being assessed, analyzed and predicted. But it will be no fewer than five or ten

years before there will be any definitive answers to the many, long term questions. Some biologists say there may be short term disasters, but the impact on the Sound's fisheries over the next several years may be minimal. It is far too soon now for any biologist to come up with a definitive answer about long term impacts.

**Conclusion:
Short Term Net Gain;
Long Term a Question Mark**

Because Valdez has become overnight the center of the oil cleanup effort, a boom town atmosphere prevails there, a situation reminiscent of Nome's gold-induced rush at the turn of the century.

There was little opportunity to plan for this massive mobilization. As a result, this has required the usually quiet town of Valdez to bear many costs associated with the boom — housing and labor shortages, crowded streets and stores, increased crime, and overburdened community services. Yet at the same time, Valdez is reaping many short term economic benefits.

Cordova's picture is quite different. Some describe the town, in its present state, as being deserted. Many Cordova residents and owners of its fishing fleets are now working on the spill. Businesses aren't seeing the usual spring activity. The good news for Cordova is that the Copper River Flats salmon fishery has opened successfully.

The integrity of other Sound fisheries remains in doubt until late June and July. Of primary concern is the salmon catch, the Sound's economic mainstay. Of continuing, but lesser, concern are the herring, bottomfish and shellfish catches.

Of greatest concern for the Sound's two small, native villages is the future of their subsistence resources.

Except for an increase in railroad freight traffic, Whittier has so far escaped many of the spill's impacts.

There is no doubt that the 1989 Prince William Sound economies will experience a substantial net increase in activity. But this increase appears trivial when one ponders what might lie ahead in 1990 and beyond.

Prince William Sound's economic future looked bright prior to the oil spill. Valdez's economic diversification efforts were shaping up nicely. Due to hatchery efforts, the Sound's fish stocks were on a strong upswing. Tourism was growing steadily. It has shown continuing, great potential for attracting additional visitors to Alaska.

Now, though, there is a shadow hanging over this quick and painful economic shot in the arm provided by oil cleanup dollars. It is the danger of a negative economic reaction that could follow. Will the long term economic reaction be positive or negative? Time will render the verdict.

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