Company claims sound environmental practices

From page 1

137 million pounds of copper. Results from recent drilling indicate copper mineralization is nearly 3.5 million tons with a 2.2 percent copper content, according to a newsletter from Plexus.

Bornite and chalcopyrite are the principal ore minerals. The formation extends more than 1,000 feet below the surface. It is 400 to 450 feet in diameter and narrow toward the surface.

The project is located on 32 acres of new growth timber, according to Gordon.

Gordon said the mine and the environment will get along well. Half of the tailings from the operation will be put back into the ground and the balance will be distributed on the surface. The tailings consist of a fine grain, similar to beach sand, Gordon said.

All of the waste products will be benign non-toxic substance, he said. “We will replant with natural vegetation as we go,” Gordon stressed.

At the conclusion of the mining operations, buildings and mining facilities will be taken out and the land reclaimed, he said.

During construction, Plexus will employ 100 people and later 65 full time people.

“Hopefully, most of the employees will be from the local labor pool,” he said.

Once the mining operation is in full swing, employees will be paid from $10 to $15 per hour. The total annual payroll is estimated at $2.5 million plus benefits, according to the Plexus newsletter.

“Plexus will develop a training program to retrain local workers for the bornite mine work force,” Gordon said.

Skills developed in the forest products industry are desirable, said Gordon, stressing that local hiring also helps guarantee a stable, long term work force.

Equipment used at the mine will be rubber tired, diesel-powered loading and hauling vehicles that are built differently than surface vehicles, he said.
Copper mine site would return to wild

Michael Donnelly, an Oregon Natural Resources Council board member who recently saw the same presentation at the company's invitation, said Plexus has addressed most of the concerns of environmentalists.

"Right offhand, I thought if you're going to do mining, that's the most Earth-friendly kind I've heard of," Donnelly said. "If they do everything they've said they will, it should be OK." He added that the environmental council has yet to comment formally on the plan.

The mine, if it's approved by the U.S. Forest Service and other government agencies, is expected to produce 137 million pounds of copper and some gold and silver, said Allen Gordon, Plexus vice president for technical services.

It would employ between 80 and 100 people, four-fifths of them hired locally, and would put as much as $4.5 million a year into the local economy in payroll and purchases, Gordon said.

Plexus does not plan to apply for a patent, or ownership, on the 32-acre site and would put 1.2 million tons of copper ore tailings back underground when the mine is exhausted, he said.

Another 990,000 pounds of tailings would be left on the surface, covered with topsoil and replanted, Gordon said. The area now is planted in second-growth forest.

There could be other mine sites rich in copper ore nearby that Plexus will want to develop as mineral claims, said Greg Gosson, the company's chief geologist.

The Willamette National Forest has tentatively scheduled local public meetings on the project for late August and expects to award a contract for an environmental impact statement to an outside agency by October.

If the company's plan makes good progress through the governmental processes and is approved, construction would start in the spring of 1992 and the mine could be producing copper for export to Asia nine months or a year later, Gordon said.
Editorials

Mine near Opal Creek

Project may benefit area

The people who are proposing to create the state's largest underground mine near Opal Creek east of Salem have put their best foot forward.

If they do everything the way they describe it, Oregon might be able to live with a 1,000-foot-deep copper mine in the Cedar Creek Valley on the fringe of the scenic old-growth forests of Opal Creek.

We will wait and see, hoping that a two-year environmental study by the U.S. Forest Service and state agencies provides the guarantees of protection for our water supply and the area's environment — or proves that the Plexus Resources Corp. project is not feasible.

The main reason that we give it a wait-and-see grace period is that it would provide good jobs for workers in North Santiam Canyon timber communities that have been hard-hit by timber harvest restrictions.

Everyone has urged that new businesses move in to keep the canyon's economy going. Now we've got one that would employ 65 people.

The goal of environmentalists in challenging the rate of timber harvest on public lands has been to protect the value of forests in the total ecosystem of the area. That protection need not render all forests off-limits to all economic activity.

The Cedar Creek area, where the mine is proposed, already was in line for limited timber harvesting in a plan that would put Opal Creek off limits. Others have urged that parts of the area be made into a state park — also an economic use. So mining should not be ruled out as incompatible with sound multiple use of the area.

The announcement of the mining plans comes as the legislature and Congress have been considering restrictions on mining, especially open-pit leach mining in Eastern Oregon. There appears to be nothing in the Plexus project to raise the same fears that pit and leach mining raise in Eastern Oregon.

The Plexus mine would be tunnels instead of open pits, and much of the tailings would be returned to the tunnels rather than left in a heap.

More questions than answers have been raised so far about the mine's effects on the environment and on traffic near the popular Shady Cove campground and Elkhorn area. But the public should be willing to wait for assurances on a project that could help timber communities.
Plexus Inc. Submits Bornite Project Plan of Operations

Plexus Inc., based in Salt Lake City, Utah, announces it has begun the formal process to acquire a permit to develop the Bornite project underground copper mine 50 miles east of Salem in the Cedar Creek Valley.

Plexus' vice president for technical services, Allen Gordon, said the company has submitted its plan of operations to the U.S. Forest Service. The plan outlines details for the Bornite project, which is expected to last at least eight years and employ between 80 and 100 people.

The project is expected to produce 137 million pounds of copper with substantial amounts of gold and silver also coming from the 32 acre site.

Mineral discoveries were first made in the area around 1877. During many years of operation, Santiam copper mine shipped ore averaging about 10% copper. Shiny Rock Mining Co.'s Ruth mine currently is the only active mine in the Santiam mining district. Plexus acquired the Bornite site from Amoco's Cyprus Minerals in 1989.

The Bornite orebody is contained within a breccia pipe, a rock formation that is cylindrical and extends down from the surface about 1,000 ft. The formation has been dated to be 10.1 million years old.

Mr. Gordon said that Plexus' mining plans call for a modern underground mine with an adjacent mill site. No old growth timber will be disturbed and access to the site will be along existing Forest Service roads.

Surface activity at the site will be held to a minimum, confined to underground support facilities, surface water diversion and control structures and tailings containment facilities. Over half of the tailings will be put back underground as the project progresses. Vegetation will be re-established at the site as soon as possible and at the end of the project the entire area will have been fully reclaimed. Buildings and mine facilities will be removed and remaining tailings will be recontoured to blend with the area's natural surroundings and then re-vegetated, according to Mr. Gordon.

The Bornite project also offers significant job opportunities in the Santiam Canyon where many timber jobs have been lost. "The mine is expected to put many of those people to work again," Mr. Gordon said. "Plexus will develop a training program to retrain local workers for the Bornite mine work force. Skills developed in the forest products industry are desirable and local hiring also helps guarantee a stable, long term work force."
Mine plan digs into forest

Project would bring 80 jobs near Opal Creek

By Dan Postrel
The Statesman Journal

A Utah company is proposing to dig a 1,000-foot-deep copper mine in the Willamette National Forest east of Salem, about 2½ miles from scenic Opal Creek.

The project would provide about 80 jobs for at least eight years, producing about 137 million pounds of copper.

Officials with Plexus Resources Corp. of Salt Lake City said about 60 of the workers could be hired from the economically depressed timber towns of the North Santiam Canyon.

Ore would be extracted from tunnels, in contrast to open pit mining, in which topsoil is scraped away.

The operation would be the state's largest underground mine.

The proposal faces at least two years of environmental study by the U.S. Forest Service and state agencies.

The mine would be in the Cedar Creek valley, about 50 miles east of Salem.

It is flanked by undeveloped areas prized for their towering trees, scenic views and rushing water.

Over a ridge to the east is Opal Creek, which has become a national symbol of the fight over logging in the Northwest's national forests.

Cedar Creek, however, does not have the pristine quality of the neighboring valleys.

"It's the only part of that whole area that's been spared," said George Atiyeh of Gates, the best-known opponent of proposals to log Opal Creek. "These guys really lucked out."

Plexus acquired long-term leases on mining claims in the area in 1989 from Cyprus Minerals Co. of Denver.

Allan Gordon, a Plexus vice president, said about five truckloads of copper concentrate would leave the mine daily, probably destined for smelting overseas.

According to company plans, no old-growth trees would be affected and existing roads would be used for access.
Plexus: Copper mine is earth-friendly

Plexus Resources Corp.'s proposed copper mine in the Willamette National Forest bears little resemblance to Oregon gold mining plans that have triggered a huge environmental battle.

Several companies have expressed interest in extracting gold from large pit mines in the eastern part of the state.

Although mining executives say the process can be handled safely, environmentalists have sought to place strict controls on it. Some have said they would like to ban it. Some have said they would like to ban it.

According to interviews and documents that Plexus has submitted to the U.S. Forest Service, the copper and gold mining proposals differ in at least two key respects:

- The gold mining plans typically involve the use of cyanide to leach particles of gold from ore. The Plexus operation would use primarily mechanical means to extract copper from ore.
- Pit mining involves large amounts of land. The Plexus mine would be underground, and more than half of the mining wastes, called tailings, would be returned to the tunnels.

In all, the copper operation would cover about 32 acres of land. Milling and related operations would cover eight to 10 acres, and tailings not returned to the mines would be formed into a contoured layer over the rest.

"At this point, it does sound kind of earth-friendly, as mining goes," said Michael Donnelly of Salem, a vice president of the Oregon Natural Resources Council.

But he said his group needed more information before forming an opinion.

"We're going to look at it real closely," he said. "That's our water supply, not to mention the national forest."

The mine would be near Cedar Creek, a tributary of the North Santiam River's Little North Fork.

The North Santiam is Salem's drinking water source, and the city has taken increasing interest in recent years in activities in the river's drainage area.

Dan Bradley, Salem's water superintendent, said officials didn't consider the project a threat to water quality.

Allen Gordon, a Plexus vice president, said his company intended to make the project a showcase for modern mining techniques.

Milling equipment would be placed in buildings to minimize noise and dust, he said, and the entire site would be returned to a near-natural state when the mining is done.

George Atiyeh of Gates, an advocate of preserving Opal Creek and the owner of a small mining operation, agreed that the project could be environmentally sound.

"I think it will be a good thing, as long as they do everything they say they are going to do," he said. "If they don't, we're going to come unglued."

Mill City hopes for new mine

MILL CITY — People here welcome the prospect of a new copper mine and the jobs it could bring. Officials with Plexus Resources Corp. have said their mine could provide about 65 jobs for heavy-equipment operators and other local workers.

"We're excited about the possibilities that exist," said Kevin Long, the president of the North Santiam Chamber of Commerce.

The area's economy depends on the timber industry, which faces declining U.S. Forest Service timber harvests, uneven demand for its products and other problems.

Long said he hoped that government restrictions would not prevent Plexus from going ahead with its $13 million project.

"The best thing the Forest Service could do for this community would be to really focus on this project and give it a tremendous amount of attention," he said.

Long said he recognized that the mine was not a permanent solution to the area's economic problems.

The mine's life is expected to be about eight years, with two more years for construction and eventual reclamation.

But company officials have said they hoped to find other deposits in the area that could prolong the project.

The company has named the mine the Bomite Project, for a copper-bearing mineral.
Utah firm seeks OK for mine

From Register-Guard and news service reports

A Utah company is proposing to dig a 1,000-foot-deep copper mine in the Willamette National Forest east of Salem, about 2½ miles from scenic Opal Creek.

The project would provide about 80 jobs for at least eight years, producing about 137 million pounds of copper.

Officials with Plexus Resources Corp. of Salt Lake City said about 65 of the workers could be hired from the economically depressed timber towns of the North Santiam Canyon.

Rob Freres, who owns a mill in the canyon, said the proposed copper mine would be a "wonderful thing."

"I'm thrilled to see it come to the North Santiam Canyon," he said. "It's always nice to diversify our economy up there. I pray that the preservationists don't sue to prevent them from becoming a success."

Freres, who employs 280 people, said 65 more jobs in the area would be a welcome prospect.

"It's been very trying for the local community and its citizens to plan their futures and to know what kind of job opportunities are going to present themselves in rural Oregon," he said.

The operation would be the state's largest underground mine. Ore would be extracted from tunnels, in contrast to open pit mining, in which topsoil is scraped away.

In Eugene, Oregon Natural Resources Council spokesman Wendell Wood said the proposal was just one more attempt by private companies to mine on public land.

"We will want to study the proposal further," Wood said. "Whether cyanide leach mining in Southeast Oregon or mining in the Oregon Dunes or now copper mining in the Willamette forest, we have to make sure that the public interest is served and that speculators are simply not able to exploit minerals for short term profits at the public's expense."

The Utah company's proposal faces at least two years of environmental study by the U.S. Forest Service and state agencies.

The mine would be in the Cedar Creek valley, about 50 miles east of Salem.

It is flanked by undeveloped areas prized for their towering trees, scenic views and rushing water.

Over a ridge to the east is Opal Creek, whose old growth trees have become a national symbol of the fight over logging in the Northwest's national forests.

Cedar Creek, however, does not have the pristine quality of the neighboring valleys.

"It's the only part of that whole area that has been roaded and cut," said George Atiyeh of Gates, a well-known opponent of proposals to log Opal Creek. "These guys really lucked out."

Plexus acquired long-term leases on mining claims in the area in 1989 from Cyprus Minerals Co. of Denver.

Allen Gordon, a Plexus vice president, said about five truckloads of copper concentrate would leave the mine daily, probably destined for smelting overseas.

According to company plans, no old growth trees would be affected.
FOR IMMEDIATE RELEASE
Contact: Mike Washington
(801) 363-9152

June 11, 1991

PLEXUS RESOURCES COMPLETES FINANCING

Salt Lake City, Utah: Plexus Resources Corporation announced today the completion of a US$12.5 million dollar financing with Mase Westpac Limited. The new facility will repay an existing 17,100 ounce gold loan and $2.7 million of short term debt. The balance of the proceeds are for general corporate purposes.

The new facility includes a $10 million, 27,500 ounce, six-year term gold loan, and two revolving loans that provide up to $2.5 million for working capital needs. The gold loan is convertible to a currency loan at the company's option and the term can extend for one year based on cash flow and reserve criteria.

Plexus Resources Corporation is a North American minerals development company. Its common shares trade on the Toronto Stock Exchange (PXS) and the NASDAQ System (PLUSF).

# # #
THE BORNITE PROJECT:
Getting Off the Ground Now; Getting Under It Later

The Bornite Project is in the western Cascades, about 50 miles east of Salem in Cedar Creek Valley in the Willamette National Forest.

Plexus Inc. is now turning the project into a new underground mine.

Bornite, over a minimum eight-year life, is expected to produce 137 million pounds of copper with substantial gold and silver by-product values. Recent drilling results indicate copper mineralization is nearly 3.5 million tons with 2.2 percent copper content.

Cypress Minerals in 1989 and began a limited drill program to test continuity of copper mineralization. In 1990, the Company continued its program to define margins of the ore zone, confirm previous results, test for grade continuity, and provide more metallurgical sampling. Plexus drilled 16 diamond drill core holes totalling 10,074 feet. Every hole hit major ore-grade minerals.

Geology

The Bornite ore body is contained, within a breccia pipe, which is a roughly cylindrical rock formation that extends from the surface for more than 1,000 feet. It is 400 to 450 feet in diameter and narrows toward the surface. The pipe has been dated by scientific methods to be 10.1 million years old.

Copper minerals were deposited as part of the breccia matrix and inside sheeted quartz veins on the pipe’s margins. Bornite and chalcopyrite are the principal ore minerals.

History

Discoveries were first made in the area around 1877. Most properties were located by 1903. Over the years, the Santiam Copper Mine shipped around 223 tons of ore averaging 10 percent copper. Shiny Rock Mining Company's Ruth Mine is the only mine in the area still active today.

In 1975, Amoco Minerals Co., now Cyprus Minerals, located mining claims over the Bornite Project area based on proximity to known copper-bearing formations as well as other geologic indicators. Amoco began drilling in 1977 and by 1979, the Bornite ore body was identified.

Plexus acquired Bornite from Cyprus Minerals in 1989 and began a limited drill program to test continuity of copper mineralization. In 1990, the Company continued its program to define margins of the ore zone, confirm previous results, test for grade continuity, and provide more metallurgical sampling. Plexus drilled 16 diamond drill core holes totalling 10,074 feet. Every hole hit major ore-grade minerals.

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Copper minerals were deposited as part of the breccia matrix and inside sheeted quartz veins on the pipe’s margins. Bornite and chalcopyrite are the principal ore minerals.

Continued page 2 column 1

Bornite and the Environment Will Get Along Well

Plexus Inc.'s design, construction and management of the proposed Bornite Mine will show that mineral extraction can exist in harmony with other natural resources and values. When the mine is up and running, the Bornite Project will be a safe and clean example of modern, high-tech mining practices in a multiple-use area.

Since most of its activities will be underground, surface disturbance will be limited to a small area. No old-growth forests will be damaged. Those relatively small surface disturbances will be confined to the mill and underground support facilities, surface water diversion and control structures, and residual ground rock by-product (tailings) containment. However, more than half of the tailings will be put underground as mining progresses.

Surface disturbance will be held to a minimum. Vegetation will be re-established as soon as possible. At the end of the operation (eight years, minimum), the site will be reclaimed. Buildings and mine facilities will be removed. The remaining tailings will be recontoured to blend with the area's natural surroundings, and then revegetated.

Tests on ore and non-ore geochemistry are extremely important.

Continued page 2 column 3
Bomite is an iridescent purple or blue color. It is called several other names: Variegated copper, peacock ore, horseflesh ore, and purple copper. Chalcopyrite is a bright brass-yellow mineral and is considered one of the important copper ores.

**Mining**

Plexus' plans for the Bomite Project include a modern, safe underground mine that will yield 1,400 tons of ore daily, five days per week.

The equipment used underground will be rubber-tired, diesel-powered loading and hauling vehicles. They are built somewhat differently than surface vehicles but they accomplish much the same tasks as surface heavy equipment.

Access to the ore body will be a ramp tunnel.

Eventually, the underground operation will be more than 900 feet deep. The surface entrance will give only a small clue as to the size and scope of the activity below.

**Metallurgical Process**

Metallurgical testing on Bomite ores shows high recovery of copper in a premium concentrate. Plexus proposes to process 1,000 tons of ore a day in a concentrator, incorporating a crushing unit that would reduce 24-inch, run-of-mine ore to one-half inch size.

The crushed ore will then be coarsely ground in a rotating mill, and the coarsely ground minerals will then be concentrated in a froth flotation process using safe, non-toxic reagents.

After dewatering, the concentrates will be shipped out of state to a smelter to produce refined metal.

**Permitting**

Plexus is now involved in the permitting process set by Oregon's Department of Geology and Mineral Industries and the U.S. Forest Service. Following a meeting last November among Plexus and several state, city, county and U.S. Forest Service representatives, Plexus began a rigorous effort to characterize the proposed operation. The Company is gathering baseline data to be used in the ongoing analysis and plans to submit a U.S. Forest Service Plan of Operations based on this work in May, 1991.

Plexus recognizes the need for a comprehensive permitting process receiving informed public scrutiny. In talks with the U.S. Forest Service, the Company has pledged to develop all proper information to address specific concerns relating to the Bomite Project. There will be significant opportunity for citizen review during this process.

Plexus intends the Bomite Project to be a showcase of mining's ability to coexist with the area's other important resources.

**The Bornite Edge: Environmental Pluses**

The proposed Bornite Project will be an example of mining the right way. Here are some of the reasons that the mine will be an environmental showcase:

- Compatible with natural resources
- Minimal surface disturbance
- Tailings returned to underground
- Total reclamation
- No acid drainage
- No acid-generating potential
- No use of cyanide
- No leaching of ore
- Groundwater protection program

Water is an important feature of any site and groundwater resources at Bornite will be protected at all times. The underground workings of the mine will be planned carefully to avoid any areas with known fracture systems that could serve as water courses. Any major flows of water into the mine workings will be immediately controlled to minimize the total quantities handled. All water used in mining and milling will be continuously recycled. When Plexus leaves, the water will be as clean as when they arrived.

Plexus will make sure that the Bomite Mine exists in harmony with the other natural resources and values in that part of the Cascades. The project will be managed in a way consistent with the multiple-use objectives of the area and the needs of the people of Oregon.

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**Editors note:** This newsletter will be updated quarterly as the project advances towards production.
An Inside Look at Plexus

Plexus is a diversified natural resources company headquartered in Salt Lake City, Utah. Plexus also has offices in Oregon, California, and Montana.

Plexus, founded in 1980, is young when compared to many mining companies. But its youth is balanced by the experience and expertise of its people. The Plexus team has the managerial and technical skills, the foresight and patience, to make sure that the Company's projects work... on all levels and for everyone involved.

While Bornite is the first mining operation to be totally owned and operated by Plexus, the Company is involved in several precious-and-base-metal mining projects throughout the West. The Company participates in mining gold and silver in Nevada; copper, gold and silver in California; gold and copper in Montana; silver in Arizona; copper, silver and molybdenum in Washington, and, of course, copper, gold and silver in Oregon.

Since its beginning, it has been the Plexus philosophy to form partnerships that bring exceptional expertise and efficiency to its mining projects. In keeping with that strategy, Plexus is involved in diverse mining projects with several respected companies such as Cyprus Minerals Exploration Co., Kennecott, Kiewit Mining Group, and Noranda.

But Plexus has more going for it than mining. When it started in 1980, Plexus was primarily an oil and gas company. Today, it still retains an interest in 75 gas wells, eight oil wells, and an Oklahoma gas gathering system and plant. Oil and gas production is located in West Virginia, Utah, Colorado, Oklahoma, Wyoming, North Dakota, and Montana. Plexus also serves as general partner for three oil and gas limited partnerships formed in 1981, 1983 and 1984.

Plexus also undertakes minerals exploration and tends to work on properties with known mineralization.

Throughout its far-flung network of different projects and activities, there is a common philosophical thread: Plexus believes that the natural resources industry is essential to the nation and that important and necessary minerals can be extracted from the earth today in an environmentally responsible and acceptable manner.

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Meet Art Ditto, Plexus President and Founder

Plexus founder, Arthur H. Ditto, is not your stereotype company president and chief executive officer. Not by a long shot.

Ditto, 50, is comfortable wearing jeans, a work shirt with the sleeves rolled up and a Plexus baseball cap. And he's just as comfortable in a starched shirt, tie and conservative business suit. He'll sit at a conference table with a group of bankers and negotiate a long-term project financing deal; and, with equal ease, he will slog through the mud at a mine site, making sure that the project is moving along according to plan.

Art Ditto doesn't ask Plexus employees to do anything he hasn't done... or won't do.

He brings more than 27 years of mine operation, project management, and construction experience to the Company. His entrepreneurial spirit has come to the surface, as witnessed by the fact that he has raised more than $46 million in equity, limited partnership, and joint venture financing for the firm.

When he was with the Anaconda Company, Ditto was responsible for the development of a $217 million mining and processing project.

Born in Canada, Ditto graduated in Mining Engineering from Montana College of Mineral Sciences and Technology. He is a registered Professional Engineer.

He lives in Salt Lake City with his wife Marjorie and two of his four sons.
As jobs in Oregon's timber industry have disappeared, the area around Plexus' Bomite Project has been hit extremely hard. The Bomite Mine can get many of those people to work again.

Once the mine is operating, Plexus will need a work force of 75 to 80. Base wages for hourly operations workers will range from $10 to $15 per hour, before overtime. The total annual operations payroll is estimated at just over $2.5 million. Benefits are in addition.

Up to 100 will be employed during the project's initial construction.

Many of the jobs during mining operations will call for skills already used in other industries, such as construction, timber and agriculture. While underground mining equipment is configured differently than heavy equipment used on the surface, it accomplishes much the same tasks in much the same manner.

Plexus hopes that a majority of the skilled workers employed at the Bomite operation will be established local residents.

To assure a safe transition to a new working environment, the Company will establish training and re-training programs to acquaint new workers with mining skills. Going underground may seem a little different at first, but Bomite will be a modern, safe, highly efficient mine with stable conditions.

As the project progresses, Plexus will notify local residents of job opportunities as they become available.

### Skilled Workers Will Be Needed
As the Bomite Project is built and goes into full-time operation, employees with a wide variety of skills will be employed:

- Truck drivers
- Other heavy equipment operators
- Maintenance people
- Managers
- Process technicians
- Engineers
- Clerical workers
- Support personnel
Chamber Members Hear About Plexus Inc.'s Local Bornite Project

Members of the North Santiam Chamber of Commerce listened to Bart Stone, Senior Geologist, for the Plexus Inc.'s Bornite Project. Stone described how the mineral deposit was formed, the way it would be mined, and exactly what progress has been made on the Bornite project to date.

The deposits were discovered in 1975 by Amoco Minerals Co. Amoco began drilling in 1977, with the Bornite ore body identified in 1979. Plexus bought the project from Cyprus Minerals (formerly Amoco Minerals) in 1989 and began a series of tests on the site.

Utilizing a video tape and a slide presentation, Stone told listeners about bornite itself and how the copper rich deposit was formed. He explained Bornite is the name of the copper-rich ore found on the site, hence the name the Bornite Project. The deposit was formed as the result of a breccia pipe.

"As gases from the magma cool in the fingers very high pressure, super heated gases formed a bubble at the end of the finger. About 10 million years ago the bubble burst, with the gas escaping through cracks and fractures in the rock. With the pressure gone, the gas chamber collapsed, filling with broken rock creating a "breccia pipe," approximately 1,000 feet from top to bottom and 450 feet wide. Under tremendous pressure and heat the broken rock began to bond and a super-heated brew of mineral saturated water passed through it. The dissolved minerals in the water passed through the rock. As the mass cooled and bonded the minerals formed at the tip and the sides of the finger," Stone added.

Stone explained although a number of minerals are located in the "breccia" the primary minerals Plexus expects to recover from the Bornite Project are copper, gold, and silver. All total, Plexus expects to remove approximately 2 and one-half million tons of ore from the project yielding 2,33 percent copper and .016 percent gold or approximately 137 million pounds of copper and 40,000 ounces of gold over the ten year life of the project.

"Since we're on Forest Service land we have to adhere to strict policies set at government standards. Plexus is a mining company that keeps the environment in mind during it's projects. We'll adhere to a strict set of rules and regulations, and we don't expect too much of an impact on the environment when the project is completed," Stone said.

He went on to say as most of the rock taken from the mine will be returned after the minerals have been removed. Since not all the material removed can be returned beneath the earth's surface, any remaining material will be spread above ground with vegetation planted during the mining projects life.

"Anytime you blast and remove rock from beneath the earth's surface, you can't possibly put all the material back. It's our goal to leave what's left over above ground and plant the area back to natural vegetation so within a few years of the end of the mining operation, a person who didn't know the mine had existed, wouldn't be able to tell there was a mine on the site at all," said Stone.

Any water leaving the site will be of drinking water quality so the mine poses no threat to Cedar Creek or streams like the Little North Fork of the Santiam or the North Santiam itself. In addition there will be no hazardous chemicals, such as cyanide, used during the reclamation process to leach or leave a residual at the site.
The scum will be removed and concentrated. The ground the ore will be hauled about 30 tons of ore per truck. Once above ground the ore will be crushed into a fine sand-like material returned to the mine and processed before being shipped out from the mine. Each section will be 200 feet deep.

"We'll harvest the mine in sections, each section will be approximately 100 feet wide, fifty feet deep, and 200 feet high. When we mine a level we'll remove a section, skip a section, and mine another section. The rock will be taken above ground with low profile trucks capable of hauling about 30 tons of ore per truck. Once above ground the ore will be crushed into a fine sand-like material, mixed with water and concentrated. The minerals will come to the top of the water to form a scum. The scum will be removed and processed before being shipped out from the mine site. The remaining sand-like material will be mixed with water and pumped back to the section it was removed from to refill the gap left by the mining," Stone indicated.

He went on to say the material returned to the mine would harden like concrete in approximately 30 days, allowing miners to remove sections between areas already removed, allowing complete removal of mineral rich ore in each section.

Stone explained the mine itself will be a cylindrical shaped mine, around the breccia itself. Since the mineral deposit is around the outside of the breccia, tunnels will be dug to the site and the mine itself will circle the finger allowing the mineral deposits to be removed in sections. The mine is expected to be approximately 1,000 feet deep at completion with five separate layers. Each layer will be 200 feet deep.

"The third party company, Mariah, will examine our study and see if the information we've included in the EIS is correct and come out with a number of different plans for the project. It's much like the study done on the Willamette National Forest, where researchers came up with any number of plans for sections of the forest. Mariah will come up with a number of different plans for the Bornite Project, then the government will look at all the data and decide a plan of action for the site. If the government decides to allow the Bornite project to continue following the EIS study, we expect to begin operation early in 1993. The study is an 11 month process, and was started January 4, 1992 so right now things are proceeding on schedule," Stone said.

He said communication between Mariah and Plexus has to go through the Forest Service and that takes some time.

"If Mariah personnel have a question about some of our data, they have to contact the Forest Service, and the Forest Service has to contact us. Then we send our data to the Forest Service and they in turn send the information back to Marla. It's kind of a slow process, but that's just the way the system works," Stone explained.

Over the eight year life of the mine and the ten year life of the project, Stone said Plexus will continue its research in the area throughout the life of the Bornite Project," Stone added.

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search the local area for additional sites rich enough in ore to justify the expense of a mine.

"It's the dream of every miner to find additional mines in the area, within a 10 mile radius, but at this point we really don't know if we'll find any. I do know it's common to find a number of breccias when you find one. Whether we find any more and what they will contain will we find them is still up in the air, but I'm sure Plexus will continue its research in the area throughout the life of the Bornite Project," Stone added.
Copper mine study begins

A Wyoming firm has been selected by the Willamette National Forest to prepare an environmental impact statement (EIS) for the proposed Bomite Project copper mine located in the Detroit Ranger District, near Elkhorn.

Mariah, based in Laramie, Wyoming, has completed over 250 environmental documentation projects, including major precious metal developments on other National Forests. Mariah's staff brings technical expertise in ecology, geology, hydrology, archaeology, history, sociology, land-use planning, and other disciplines. Phil Ogle, Mariah's project manager, is a biologist with years of environmental analysis experience.

The contractor's role in the project proposed by Plexus, Inc., is to serve as third-party to prepare the Environmental Impact Statement. Mariah will evaluate all project reports, assess potential environmental impacts, address public response to the draft EIS, and prepare a final document.
Plexus Begins Countdown

The countdown is on for Plexus Corporation and Bart Stone, Senior Geologist for Plexus in Mill City, who hopes things will work out with on-site construction beginning in January of 1992.

Stone said the countdown began January 3 with the hiring of a third party contractor to research an Environmental Impact Study for the US Forest Service for the landowner.

"Marble and Associates has been hired to be the third party contractor on the Borstite project. They'll look at the information given to the Forest Service about the project, the plan of operations, the accuracy of the data and publish a final document in August of 1992," Stone said.

"From the Federal Government, we'll get to work on the site as soon as it is feasible," Stone said.

Stone said in addition to the final countdown on the EIS, on the project, workers have drilled six monitoring wells at the site. The six inch wells will be used to monitor ground water and check the fluctuation of ground water in the area and as a quality control system when actual excavation begins to take place.

"We need to know how the water level in the area drops or raises with weather conditions the year around," and when we begin the actual project we'll use those wells to monitor the quality of the local ground water to make sure we're not contaminating the area in any way. The wells are really a quality control check for us," Stone added.

The newest addition to the Plexus crew in Mill City is geologist Mark Nyman, who will assist with the Borstite project throughout the Pacific Northwest and other geological evaluations, including several sites in Nevada that are based out of the Mill City office of Plexus Corporation.

"Plexus is still taking names and telephone numbers of prospective employees and will be able to place workers in a number of different job skills, ranging from truck drivers to maintenance workers. Stone indicated anyone working in the timber industry would probably possess skills that would work for them at Plexus."
Wyoming firm to prepare EIS on Borneite mine.

Marine Associates Inc. has been selected by the Willamette National Forest to prepare an environmental impact statement for the proposed Borneite mine project in the Oregon Range. During the first phase of the project, Willamette will compile environmental documentation for several projects, including the Borneite, to address potential environmental impacts of the project. The environmental impact statement will address public response to the project and potential environmental impacts. Graphic Media has produced TRM Copy Center, Corp's initial public stock offering presentation which is being shown to major investment brokerage firms nationwide. TRM's 12,000 self-service photocopy centers are located in retail establishments in 30 markets in the United States and Canada.
Foster resident wonders about ecologists' efforts

Webster defines confused as a state of great disorder. That certainly describes my present state of mind. It looks as though societal pressures, fueled by pseudo facts from self-appointed experts have created a political carnival with all the leaders relying on trick mirrors for solutions.

We can't log the trees in the forest because it is ugly; because it damages wildlife habitat; and because the ecologists have decided removing trees is a bad thing.

We can't log trees from an area called Opal Creek because the ecologists have ordained this particular ground as sacred. Removing any of the trees could be an end to life as we have come to know it.

Water quality would forever be spoiled— and now I am really confused. A mere hop, skip, and jump away, the ecologists, the politicians (Rep. Les AnCoint, Peter DeFazio, Mike Kopetski) and, best of all, George Atiyeh, have warmly embraced a future copper mine.

Does this mean that gouging a huge hole in the ground and removing a 'non-renewable' resource and exporting the raw material will have a healthy effect on the aquifers and the overall quality of life?

Retha Renoud
7-7-7 Foster
Consultant named for mining statement

MILL CITY. The Willamette National Forest has awarded a contract for preparation of an environmental impact statement for the proposed Bormit Project copper mine in the North Santiam Canyon. Mariah Associates Inc. of Laramie, Wyo., received the contract for $173,560.

The Forest Service will oversee Mariah's work.

The full cost will be paid by the company proposing the mine, Plexus Inc. of Salt Lake City.

The mine would be on Cedar Creek 12 miles northeast of Mill City in the Detroit Ranger District of the Willamette National Forest. The mine would employ between 75 and 80 miners during its eight- to 16-year life.

Mariah Associates has prepared more than 250 environmental documentation projects including mines in other national forests, according to Vince Puleo, U.S. Forest Service project coordinator for the mine project.

Mariah first will evaluate reports prepared for the project and then draft an environmental statement. After public comment, Mariah will prepare a final document.

Mariah will have one year from Jan. 3, 1992, to complete its work.

Under an agreement between Plexus Inc. and the Forest Service reached in November, the draft environmental statement is to be finished in June, and the final impact statement and Forest Service decision should be completed by November 1992.
Cut Down
Timber Town Is Bitter
Over Efforts to Save
The Rare Spotted Owl

As Logging Jobs Disappear,
Economy of Forks, Wash.,
Sinks, and So Do Its Spirits

Contempt for 'Tree Huggers'

By CHARLES MCCOY
Staff Reporter of The WALL STREET JOURNAL

FORKS, Wash.—The dark, damp forests that stretch across the Olympic Peninsula around this little town guard their mysteries well.

For example, just who did nail that endangered northern spotted owl to a sign off Hurricane Ridge Road deep in the woods? Curtis Sauer, a Park Forest ranger, came across the impaled owl while making his rounds awhile back. A wooden kitchen match protruded from its chest. A hand-lettered sign dangled from its neck. "The match has yet to be struck," the sign warned.

And what is to be made of this flier, fluttering from the gnarled bark of a towering old spruce tree off a back road near the Hoh River, a few miles south of Forks? "White loggers, we are with you," it proclaims. It's from the White Aryan Resistance, the violence-prone white-supremacists.

No one hereabouts admits to knowing exactly who posted these signs. But the message behind both cuts through like a chain saw: Here in the self-proclaimed Logging Capital of the World, things are getting desperate.

Frustration and Despair

The little spotted owl has been casting a rather large shadow over Forks and other timber towns throughout the Northwest for a long time. Environmentalists, wielding the Endangered Species Act and other environmental laws, have convinced courts and the federal government to limit logging on millions of acres of land to help save the reclusive birds, which nest in old trees.

But there is a difference here, one that spawns a bitter blend of anger, frustration and despair. Backwater towns of the past were mostly done in by sweeping economic changes, things like automation, foreign competition and shifting global markets. Timber is under pressure from some of those forces, too: Many people argue convincingly that a number of factors, from recession to the dwindling number of large trees, doom the loggers of towns like Forks by the end of the century anyway.

Even so, the decline of the logging towns has been greatly accelerated by distant political decisions and courtroom rulings that seem to place more value on the preservation of a natural resource—in this case, tall trees that are home to owls rarely seen even by lifelong residents of the woods—than on the jobs of thousands of rural workers.

Last year, Forks area loggers cut fully a third less timber than just a year earlier—the lowest level in 10 years—and things won't be getting better. The reason? "Owls," says Susan Trettevik of the state's Department of Natural Resources.

The calculus of owls vs. jobs mystifies and infuriates the people of Forks. But it will come increasingly into play as the growing push to save wildlife continues to crash up against the need for growth and jobs. Already, Bush administration policy makers, led by Interior Secretary Manuel Lujan, are calling for revisions of the Endangered Species Act, citing Forks and other timber towns' travails as evidence that conservation is exacting too high a price on commerce. With the act up for reauthorization this year—and with fights over salmon, smelt, gnatcatchers and dozens of other troubled species looming, the nation is struggling to decide how far to go to save plants and animals, and at what cost to human beings.
Cut Down: 'Logging Capital of the World' Is Bitter Over Environmentalists’ Efforts to Save a Rare Owl

Continued From First Page

limits to the saw. Someone already did try to burn down the park’s headquarters. And there was this: One day in June, Jeff King, a 31-year-old logger, former secretary of the Forks Timber Museum, a family man with a wife and three kids, learned that he would probably soon be laid off from his logging outfit. That evening, at home in his living room, he pressed a hunting fle to his chest and shot himself.

There were other stresses in Mr. King’s life besides his work, but friends believe losing his job pushed him over the edge.

The wounds run so deep partly because of the history of this town. Commercial logging began here in the 1860s, and it shaped the town’s character. Forks is isolated and conservative, with a reputation for high spirits. It’s a patriotic place known throughout the state for its rip-roaring All American Fourth of July parade. It has lushly forested Olympic Mountain foothills—and smoldering clear-cuts that come right down to the main highway. It has one stoplight and 10 churches and a lot of men with missing fingers, tribute exacted by the 'woods of those who go there to work. Once or twice a year, someone from Forks is killed in a logging accident.

All this has given the people of Forks a decided different view of the old forests that many people have—particularly environmentalists. “This whole area is just a big old tree farm, is what it is,” says Matt Anderson, a former logger who now works as an electrician, stating the common local view. “We cut down trees, they grow back.”

What’s the problem?

The environmentalists’ view, of course, is different. It is the view from a rutted dirt road in a heavily logged area of 300-year-old forest near Hunger Mountain, a few miles out of Forks. The area seems to have been bombed. Charred clear-cuts, the size of a dozen football fields stretch across the flanks of mountains, everything gone but a few stumps, which are burned and covered with other debris. Some still smolder, like Ground Zero. Down the side of the mountain runs the scar of a landslide hundreds of yards long, brought on by the slide after the trees were stripped. The slide has clogged Pistol Creek, once a fine trout stream, with mud and stumps. It’s too late for cut-down trees.

Elsewhere in this area, salmon spawning grounds have been buried by logging debris, one reason many species of native salmon have gone extinct, and many others are threatened. Throughout the Olympic Peninsula, though there are still millions of trees, about 95% of the old-growth, hemlock and fir are gone.

More Violence

With fewer trees and fewer paychecks being cut in Forks, local businesses are wailing. Receipts from city sales and property taxes are way off. In addition to the car dealership, the pet store, the main clothing retailer, the movie theater and half a dozen other businesses have closed in recent months. In the window of Leifer’s, the defunct clothing store, hangs a drawing by Johnny Dahlgren, age 7, son of a logger. “An owl needs 2,000 acres to live,” reads the caption. “Why can’t I have room to live?”

Social problems are erupting too. Barbara O’Hara, who runs the Forks Abuse Center, says domestic violence complaints in the past year were up more than 100%—running at a startling 60 a month. “You take away a logger’s job, tell him he can’t work, it strips him of his dignity and his manhood,” she figures. “Some men lash out at their wives as a form of reasserting some power over their own lives.”

One victim tells her story. Her husband, a logger for 15 years, had been out of work for much of the past year when a gyppo outfit (logging lingo for a small independent operator) that had lined up some state timberland offered him a job. “It was a godsend,” the woman recalls. “We were selling our furniture to feed our children.” The day before the loggers were to start clearing the site, state wildlife officials discovered an owl nest nearby and banned cutting. That evening, after a petty argument over lost car keys, the husband beat the woman, breaking her nose. “He’d never done anything like that before,” she says. “He cracked. I honestly believe the prospect of losing his life’s work overwhelmed him.” The husband has since moved away from Forks. “I don’t know where he is,” says the woman.
Children and Suicide

Other crimes are rising too. Vern Johnson, chief of police, says drunk driving arrests have tripled since last spring. "These people are faced with losing everything, and they're trying to numb the pain," Mr. Johnson says.

More troubling, Irene Smith, a school mental-health counselor, says at least five children have attempted suicide in the past several months. All were from logging families, and all had seen their fathers lose their jobs. "There is an air of anxiety and fear hanging over this whole town, and that psychological toll on our children has been horrendous," Ms. Smith says. The local high school has canceled its course in logging. Administrators couldn't justify encouraging youngsters to go into logging.

The sullenness even intruded on the town's Fourth of July bash last summer. One float after another clocked downtown denouncing owls and environmentalists. A hot-rod headed for the annual demolition derby seemed to sum up Forks's mood. Painted in camouflage, it showed Saddam Hussein being overrun by U.S. tanks. A caption read: "Tree huggers next."

In this charged and edgy atmosphere, Justin Dwyer sees opportunity. Mr. Dwyer, an amiable 23-year-old with close-cropped brown hair, is Washington state director of the White Aryan Resistance. Flanked by two skinhead colleagues at a restaurant across Puget Sound from Seattle, Mr. Dwyer expounds on what he calls "racial economics," a mélange of conservative economics, pro-worker sentiment and government-bashing. He downplays the racist aspect of White Aryan Resistance's credo. "Basically, we don't think an owl is worth any white worker's job," Mr. Dwyer says. "The government has betrayed the white loggers of this country."

It says something about the level of desperation in Forks that Mr. Dwyer and his cohorts think now's the time to mount a recruiting push there, though Forks folks are quick to say that this won't play in their town.

North to Alaska

Many Forks loggers are simply packing up and moving on, following the trees, hoping to get there before environmentalists do. Dennis Coats grew up in Forks, and went to work in the woods the day after he graduated from high school in 1970. Until recently, he could pull in about $30,000 a year. Now he's headed for Alaska, temporarily leaving his wife, three boys and a father in failing health to go north to scope things out. "I feel like I'm being run out of my own town," he says.

He pauses. "You know, I would have been perfectly happy to live and die right here in this community," he says. The next morning, early, Mr. Coats and his wife Jo-Ann have a cup of coffee in the Pay 'n Serve cafe, hold hands, say goodbye—and Mr. Coats strikes out for Alaska.

For those who stay in Forks, the state has set up programs that are supposed to retrain displaced loggers for other work, like prison guard at the state penitentiary, or refrigerator repairman.

The program has been a bust. Few loggers in Forks are much interested in being anything but loggers, especially when jobs the state steers them toward pay about half as much. Radd Leighton, a former Forest Service ranger who's a case manager for the program in Forks, finds this frustrating, but understandable. "The woods are a lot more appealing than some place with fluorescent light bulbs," he says. "I have yet to see a bear or a deer or an eagle wander through this office."

Mushroom Farming

Another problem: Many loggers didn't graduate from high school; they went straight into the woods as young teenagers. Many need extensive work to bring their reading skills up to snuff. "These are intelligent people, but their education may be inadequate, or they just haven't used those skills much," says Mr. Leighton. "But what do you do with someone who is a high-school dropout making $20 an hour, and you're telling him he has to study for six months to get up to speed for a GDE so he can qualify for a job making $10 an hour? What you do is watch them hit the door and head for Alaska or Idaho."

Sandra Kint-Ironhill heads an embryonic economic development effort aimed at remaking Forks. She talks enthusiastically of bringing in new light industry, of offset agricultural projects like growing mushrooms, of retirement resorts and tourism. She has few illusions, however. There's that rain, relentless, day after day after day. "It takes getting used to." And on the tourism front, there's a problem of aesthetics. "The first time I saw a clear-cut, I was devastated—it looked like nuclear holocaust," she says. "But there's so much more to this community than clear-cuts."

End of the Line

For most people in Forks, tourism and mushroom farming seem poor substitutes. Joe McReynolds sits in a den festooned with timber ornaments—clocks carved from spruce and yew, paintings of the woods done by his wife, collages of photos of loggers at work. For the first time in nearly 30 years, Mr. McReynolds is out of a job. He thought the gyppo outfit he owns with his sons, which at its peak employed 20 men, had a good chance to win the bidding on 50 acres of state timberland recently, but wildlife officials found an owl's nest nearby and canceled the sale. "It's just the damndest thing you ever heard of," he says.

At 62 years old, Mr. McReynolds worries that he's at the end of the line. He owes money on about $1 million of equipment. Almost everything he ever earned he put back into the business, and what he did put aside for retirement has been mostly used up paying bills lately. "I have no income," he says. "I've been cheated out of my livelihood. I'm broke."

In 1962, Mr. McReynolds and some friends put on an exhibition of logging skills like pole climbing, tree sawing and ax heaving at the Fourth of July festivities. It became an annual event, a real show-stopper. Last year, he didn't bother attending the logging show. "It doesn't have the feel it once did," he says.

He rambles through his den, pointing out a clock carved by a friend. "He got killed in the woods two years ago," Mr. McReynolds remarks matter-of-factly. He examines a framed collage of beary snapshots—his son with a chain saw, he and the boys dangling from the fat trunk of a spruce, himself atop a big logging truck. "Well," he says, "it was fun while it lasted."
Plexus Mines
One Step
Closer

A memorandum of understanding has been signed between the U.S. Forest Service and Plexus, Inc. of Salt Lake City, outlining the process to complete an Environmental Impact Statement on the Bornite Project copper mine project in the Cedar Creek Valley near Elkhorn.

Terminating the memorandum a milestone in developing the Bornite Project, the agreement sets a June 1991 date for the draft environmental impact statement and targets the completion of a final Environmental Impact Statement and record of Decision by the end of November, 1992.

Data collection work for the Environmental Impact Statement has been proceeding for a number of months and has included public meetings in Elkhorn, Mill City and Salem. The meetings have been held by both Plexus and the United States Forest Service. Both have indicated widespread public support for the project.

Plexus personnel say public comment on the project is an important part of the Environmental Impact Statement process. Issues raised by the public must be addressed in the company's Plan of Operation. Concerns addressed by Plexus so far include water quality protection, full reclamation plans, a transportation plan, local employment opportunities and protection of the environment at the mining site.

Plexus' Technical Services Vice President Allen S. Gordon said the company is continuing to conduct meetings with interested groups or individuals. He indicated meetings held with a representative of the Chemeketans and the president of the Northwest Steelheaders as an example of Plexus' commitment to the Bornite Project.

"Plexus is committed to making this a model project to showcase mining as part of a mix of resource uses in the area. We believe we can work closely with the many interested groups to develop a mine we can all be proud of," Gordon said.

Plexus is continuing to work with the Willamette National Forest and the Detroit Ranger District to demonstrate mining's ability to coexist with the area's other important resources.

When completed the Environmental Impact Statement will pave the way for the mining project that is expected to employ 80 to 100 workers locally.
Copper mine passes one more hurdle

By Ken Montgomery

The Mill City copper mine, expected to employ 80 to 120 people in the North Santiam Canyon, has passed another step in the road to completion. The mine, which is an underground ore-body in the Palisade Range, is being developed by Nexus Resources Corp. of California.

The company reported last week that it had completed the public hearing at Mill City, and that the Forest Service had received the mine's environmental impact statement. The company has also received all necessary permits to begin construction.

Nexus Resources is a subsidiary of SGI Resources, a major mining company based in California. The company plans to begin mining operations in the next year, and expects to complete the project within two years.

A few months ago, Congressman Mike Bostwick, who represents the 15th District, was critical of the project, but has since endorsed it. He has since met with the company's executives, and has been impressed with their commitment to environmental protection.

The company has taken great care to ensure that the project will not have a negative impact on the environment. The mine will be designed to minimize the amount of waste rock generated, and will be equipped with state-of-the-art pollution control systems.

The project is expected to generate hundreds of jobs, and is expected to pump $50 million into the local economy each year. The company has also promised to contribute $1 million to a local library, and has pledged to establish a local parks fund.
Plexus Mines:
One Step Closer

The mining company announced plans to expand its operations and bring new jobs to the area.

"We are committed to making this a model project that showcases mining as part of a sustainable economy," said the company spokesperson.

"With close collaboration with the local community, we believe we can work together to develop a mining project that is expected to create 500 jobs for workers in the region."
Plexus Continues EIS Study

Research and planning is continuing on the Environmental Impact Study being done by Plexus Corporation on a proposed mine site in the Cedar Creek drainage in Martin County.

Known as the Boronite Project the mine will employ approximately 80 workers when the mining begins on the site. Bart Stone, Senior Project Geologist, says if all goes well with the Environmental Impact Study (EIS) work on the site could begin as early as 1993.

"It takes approximately 18 months for an EIS to be developed. We started gathering our data in July, but the data takes 12 months to collect. We need to get all the information about flora and fauna in the site area for each season of the year before we can start a viable study," Stone said.

"Then we have to develop a plan of operation. The Forest Service has to receive our plan and select a third-party contractor to study the plan of operation," added Stone.

Stone indicated the Forest Service was in the process of finding a third-party contractor for the study at this time, but the whole process is lengthy. He thought the contractor would be selected some time after January.

"After the third-party contractor receives the initial draft a series of public hearings have to be held prior to the EIS becoming official.

"Although we don't expect to begin mining for about 13 or 14 months from now, we are taking local people's names and placing them in a log for employment later," said Stone.

"Stone said anyone who had worked in the logging industry should possess skills enabling them to work for Plexus. "It may take a while to get the mine in operation, but once we begin operation, it may take as many as one hundred workers, to build the mine site. Once we get started mining we expect to be mining in the area for about eight and one-half years," Stone added."
Volunteers Assist With Blood Drawing

The North Santiam Historical Society members, and members of the Santiam High School student body, were the volunteer aides for the October 16th American Red Cross blood drawing in the high school commons. Forty-six units were collected.

Paula Hilgers was the high school coordinator for the blood drawing and Sandra Rupert was the high school on-site supervisor. Virginia Blackburn, head cook for the school district, prepared the coffee, provided ice, and otherwise assisted with the recovery area facilities.

The nurses who operate the mobile blood drawing facility stated that the level of assistance they received from the student aides and the quality of homemade cookies was exceptionally good. This mobile facility operates in a territory which ranges from Klamath Falls to southern Washington.

Forty-nine local citizens appeared at the school to give their blood. Fourteen of them were first-time donors. Three of the prospective donors were asked to defer their blood donation because of recent illness or medication.

Historical Society members who donated cookies included, in addition to the people working as aides, Barbara Freeman, Sandra Rupert, Irene Podrabsky, Marion Dorothy, Barbara Alexa, Orpha Cree, Syble Walczak, and Carmen Barnhardt.

Student aides for the blood drawing included Mandi Larimer, Jennifer Cram, Dawn Fritz, Shauna Foster, Jolene Kowalski, Lisa Lundquist, Chelsea Stewart, Tina Thompson, Phyllis Bedwell, Chris Nonamaker, Scott Suckling, Mindy Hilgers, and Chelsea Huckebey.

An interesting piece of information was shared by the nurses from the Red Cross facility. They stated that the blood collected at the last Mill City drawing went immediately to the San Francisco earthquake victims.

North Santiam Historical Society members prepared and donated cookies. Juice was purchased with money donated by Lucille Vincent and Plexus Mining Company.

Society members who acted as aides at the recovery area, serving water, juice, coffee and cookies were Elaine Russell, Mae Ogg, and Lowell and Evangelyn Fleetwood. Their tasks included watching the donors for signs of bleeding or faintness.
WHAT'S HAPPENING
Eugene, Oregon
September 19, 1991

Earth-Friendly" Mine
Planned Near Opal Creek

Copper will soon be flowing from the Willamette National Forest, if a Salt Lake City mining company has its way. Plexus, Inc. is planning to dig an underground copper mine on a 32-acre site, now covered with young second-growth timber, in the Cedar Creek Valley 50 miles east of Salem.

Willamette officials have begun preparing an environmental impact statement for the proposed Bornite Project, named for the type of ore that is found on the site. The process that will be used, says Plexus public relations consultant Chuck Bennett, is so earth-friendly that even conservation groups aren't opposing the project. As one environmentalist put it, "It sounds too good to be true."

A mine shaft will be dug into the earth. Ore will be excavated, pulverized and mixed with water in a "conventional flotation concentrator"—a vat, says Bennett, where "benign reagents" will be added to give the copper a negative electrical charge. Bubbles containing the copper, as well as small amounts of gold, silver and other metals, will rise to the top and be skimmed off; and the water will be recycled. Over the expected eight to ten year life of the mine, Plexus hopes to get 137 million pounds of copper and provide jobs to 80-100 people.

Plans are to begin construction on the site, which is just over the ridge from Opal Creek, in the spring of 1993. First, however, Plexus must jump through a number of hoops: reclamation, building, and air, noise, and water quality permits from various state agencies, as well as approval from the Willamette National Forest.

—Jim Stiak
Mill City Council Minutes

7:03 p.m. on September 11th, 1991, Mayor Mary L. Smith called the meeting to order. In addition to Mayor Smith, council members present were: Lloyd Lewin, Mary B. Smith, Barbara Alexa, and Grant Merrill. Councillor Steve Winn was absent.

After the flag salute, Mayor Smith called for any corrections to the minutes for meetings held August 28th and September 7th. After review and comment, the minutes were approved as corrected.

Discussion of city bills led to a motion by councillor Alexa that bills be paid as presented. Councillor Smith seconded the motion which was passed by an unanimous roll call vote.

Donielle Ralph was introduced to council. She was hired by the city in a work study position at City Hall. She will be working ten hours per week during the school term.

Ralph Jackson informed council that the Bureau of Land Management (BLM) is interested in developing a mountain bike trail system in the Santiam Canyon Area. There will be a meeting with Terry Eccles of the BLM on September 24th; Mayor Smith indicated that she would like to attend.

Mayor Smith summarized some of the points made at the September 7th council workshop on parks. John Dickinson has submitted projected costs for sprinklers, top soil, and reseeding the ball field at Kimmel Park. He said he would like council to wait on their decision until representatives from the Recreation Association could come to council on September 25th.

Dickinson also advised the council that the fire at the new public restrooms used the paper towels as fuel. He wanted council to consider installing two electric hand dryers at a total cost of $950. Deputy B. A. Brown was asked about the vandalism; there was no information available on the fire investigation. John Dickinson will have the time locks installed as soon as possible. Mayor Smith also discussed the possibility of offering a reward for the arrest and conviction of anyone destroying city property. James McGehee will work on the proposed wording for the reward offer.

Patty Smyth, HGE Engineers, brought a proposal for developing a master utility plan for the city. HGE Engineers already have the facilities plans for the water and sewer systems but will need more information regarding streets, storm drains, and parks. Material from the city’s comprehensive plan will be provided.

The utility plan would be used as a basis for systems developments charges for new building. James McGehee said he would have an ordinance for adopting systems development charges ready for the September 25th meeting. Council also decided to schedule a special council workshop on systems development charges; the meeting will be held from 4:30 to 6:30 p.m., October 2, 1991 at City Hall.

Kevin Long gave the sewer report. After discussion, councilor Merrill moved they pay the bills as corrected. Councillor Alexa seconded the motion which was passed unanimously by a roll call vote.

Councillor Alexa discussed the water billing past due situation. Council decided that a resolution should be drafted that would allow the city to collect a fee when it is necessary to hand post a past due notice. An exception to the fee might be granted as long as there is only one occurrence within a six month period.

Councillor Alexa will have an update on the public bulletin board proposal, including projected costs, for the next council meeting on September 25th.

Based on a letter from the Marion County Board of Commissioners, council decided to schedule a meeting regarding the property tax assessments and bills that city residents will be receiving. Mayor Smith will contact Marion County regarding scheduling on September 25th at the council meeting.

Councillor Smith moved to read ordinance No. 241 by title only for the second time. Councillor Alexa seconded the motion. Mayor Smith read the title regarding the creation of the City Planning Commissioner. Council voted unanimously to have the title read for the second time. Councillor Alexa then moved to adopt ordinance No. 241, seconded by councillor Merrill and passed unanimously.

James McGehee briefly discussed the hearing that had been conducted before the State Land Use Board (LUBA) on September 10th. A brief on the city's position had been filed and there should be a decision by LUBA in about one month.

Mayor Smith asked for input regarding the city's bulk rate mailing permit. It was decided that it should not be renewed.

Mayor Smith then read a letter from Billie Foster, the Planning Commission president, thanking the council for the training that she and two other members had received in Eugene.

At 9:48 p.m., council broke into executive session under ORS 192.660 (Leh).

At 10:40 p.m., the meeting reconvened in open session and was immediately adjourned by Mayor Smith.
Critic attacks mining firm’s safety claims

By Dan Postrel
The Statesman Journal

STAYTON — A proposal to develop a copper mine in the Willamette National Forest got a rare dose of criticism Wednesday at a public meeting here.

A speaker who declined to give her name challenged assurances from officials of Plexus Inc., the project’s would-be developer, about its environmental soundness.

"Once you disturb the ground, it’s never the same," she said. She contended that water could leach toxic metals from the mine or from piles of sandlike mine wastes.

"They can leave the site, but that water is going to be gushing out of there forever," she said.

The woman said that identifying herself could jeopardize her job.

"I work for a government agency that would crucify me if they knew I was here," she said. She declined to identify the agency.

She spoke at one of a series of meetings organized by the U.S. Forest Service, which must decide whether to approve the proposed mine near Cedar Creek, a tributary of the Little North Santiam River.

Meetings about the plan have been low-key and sparsely attended, with few speakers offering pointed criticisms.

Responding to the woman’s contentions, Allen Gordon, a Plexus vice president, said that the mine tunnels would not intersect any major groundwater layers.

The Forest Service and several state agencies are expected to decide by late 1992 whether to allow the proposal, called the Bornite Project, to proceed.
Plexus Fields Questions at Open House September 3

Plexus Corporation held a public hearing at the high school auditorium September 3rd in Mill City. The topic of discussion was the Marion County based Bornite Project that is in the implementation stages in Cedar Creek Valley in the Willamette National Forest.

Plexus Incorporated is now turning the project into a new underground mine. The home office for the mining project is housed in the Hammond Building in Mill City. Throughout the life of the project, including initial construction activity, there will be about 100 people employed by Plexus. During most of the mining period of at least eight years, the project will employ 80 workers.

Bart Stone, Senior Geologist, stated that the hiring process would be gradual. "Before we hire the bulk of the workers we have to secure the many permits that are needed. We anticipate that the permit process will be complete by December of 1992. Initially a small crew will be hired and then these people will help train the other people that will be hired," Stone stated.

Stone added that the jobs Plexus will be accepting applications for are similar to jobs within the timber industry, i.e.: mechanics, electricians, drill operators, truck drivers, and operators for front end loaders. Some of the more technical jobs involving special skills in geology and engineering may come from out of the area but these employees will be asked to live in the Santiam Canyon Community. The project is expected to generate about $2.5 million payroll and spend $1.3 million for materials needed by the project and its crew.

The Bornite Project will disturb 32 acres of second growth forest. Access to the site will be along existing Forest Service Roads. Water management plans for the project include recycling water used in the milling. At the same time tests show that no toxic chemicals will be released into the water during the process and that water ultimately returned to the environment will be of drinking water quality.

Other concerns expressed during the public meeting were the amount of traffic that would increase along roadways. Stone stated that five 20 ton dump trucks would travel from the mine each day carrying the produced material. Other than that there would be an occasional delivery truck for diesel fuel and probably a supply truck coming once a month to deliver needed chemicals.

A citizen inquired about the wage rate and the executives of Plexus estimated wages as 10 to 15 dollars an hour. The public meeting began at 7:30 p.m. and for the first 45 minutes executives of Plexus showed a video and slide presentation. The remaining 45 minutes was used to field questions from the plus forty citizens in attendance.

The U.S. Forest Service will hold a "Scoping" meeting for the public on September 17th at the high school. The Scoping meeting is held two weeks after Plexus gives their presentation. This is done so that citizens have a reasonable amount of time to digest the information they received from Plexus and if they have any more questions they can direct them to Forest Service personnel at the Scoping meeting.

"We would like to see everybody in the valley that has any concerns over this project. If a citizen can't make it to the meeting, we encourage them to come by our office. We are here to answer people's questions," Stone concluded.
Mining Plans Explained to N.S. Historical Society

In response to a specific question, Mr. Stone explained that the name "Plexus" is Latin for "the sum of many parts." After it was explained that there will not be a night shift and that no workers will live at the site, a facetious question was asked as to what would happen if they find a "night owl" at the site. The question received a serious answer, however, as Mr. Stone told of the studies that have been done of all the fauna at the site, including determining that no spotted owl population exists there, though "one might fly over."

During the "Show and Tell" portion of the meeting, Else Allen presented the Society with an ivory chess set and an album of snapshots from the Hoenig family. Charles Kelly gave the Society a glass negative which Arthur Bailey had given to him. It depicts a train which ran from Detroit to Albany for many years.

Postcard calendars which include old pictures of the greater canyon area were a cooperative project of the Scio Society and the North Santiam Historical Society. In addition to the photographs, historical recipes are placed on the reverse of the portion with the dates. The postcards can be detached and saved or mailed. They are for sale at several local businesses, including Mill City Pharmacy, Stewart's Grocery, Hoover's Supply, Kelly Lumber Sales and U.S. and American Pacific Banks.

Other items suitable for gifts which the Society has for sale are greeting cards with historical photographs and a set of twelve postcards which have a different set of historic photographs. The greeting cards do not have a message, allowing them to be used for Christmas cards as well as for birthdays or other occasions. They are available at the Information Center or by contacting Mrs. Fleetwood.

All the security problems having been resolved, the Society began, on August 21st, moving into the room at the old bank building which the Society has contracted with the city to use. Mrs. Fleetwood reported. She explained that modern museums concentrate on displays which give specific information; they do not just set out as many items as possible.

The North Santiam Historical Society Information Center has a window display featuring garments donated by members Jan Powell and Stanley Chance. Other donations complete the display, with each donor listed on the placard next to the display. The picture panels focus on Mill City, Detroit, and the trains that served the Canyon. Pictures of Gates will be included soon. Within the next week, the visitor will have access to slides and videos which are part of the Society's collection and to the albums of pictures and information which are being collected.

Barbara Alexa and Toni Thomas provided the refreshments. The next North Santiam Historical Society meeting will take place at the Middle School library at 7:30 p.m. on October 3rd.
Mine leaders share plans

by Francés Dairy
For The Stayton Mail

ELKHORN - Officials from the Plexus mining firm and the U.S. Forest Service last week held well attended informational meetings in Mill City and Elkhorn and found no objections concerning the proposed mine near here.

The mining project will dig 1,000 feet down to extract Bornite, a mineral ore that contains copper minerals.

Bornite contains the Breccia pipe (a cylindrical rock) formation that extends from the surface to 1,000 feet below ground. It is about 450 feet wide. The material will be mined from honeycombed tunnels, according to Plexus officials, who said it will take about eight years to finish the mining operation.

Twenty ton dump trucks will haul the ore to the surface, where it will be crushed into a fine sand. Organic deterrents that form bubbles will carry the copper to the surface of a water bath and be skimmed off. The copper concentrate will then be loaded on large dump trucks and transported to a smelter. Approximately five dump truck loads will be transported daily once the operation is in full swing.

See COPPER Pg. 7A

copper mine officials discuss plans

(From page 1)

Gold and silver will be mined also, using a spiral column which will allow the heavy metals to drop.

The forest service will contract to start an 18 month environmental impact study sometime in November, said Mike Hernandez, U.S. Forest Service project manager at Detroit.

The forest service will hold its own public meetings, 7:30 p.m., Sept. 17, at Santiam High School, Mill City; 7:30 p.m., Sept. 18, Stayton Community Center; and 7:30 p.m., Sept. 19, Salem city library.

"I was very impressed. I'm excited about the project," said Bobbie Cory of Mill City, after a recent meeting in Mill City. "It will expose kids to different jobs. It will help our community. They will leave their money here."

"It's going to be good for the economy," said George Atiyeh, of Shiny Rock Mines, near the proposed Plexus mine.
Hearing scheduled on new mining regulations

The state Department of Geology and Mineral Industries will hold a public hearing in Portland today on proposed tougher mining regulations.

The meeting is scheduled for 3 p.m. in Room 707 of Portland's state office building, 1400 S.W. Fifth Ave.

The new rules were drafted to comply with House Bill 2244, approved by the 1991 Legislature.

They primarily affect mining operations using chemicals such as cyanide to leach gold or other metals from ore. Several such operations have been proposed for eastern Oregon.

A copper mine proposed in the Willamette National Forest east of Salem does not use such leaching methods.

Copies of the proposed rules can be reviewed at the Salem and Albany public libraries.
Proposed copper mine

Plexus Inc. wants to develop this mine near the Little North Santiam River, in the Cascades about 50 miles east of Salem.

Plexus officials lay out Cascade mining plan

Company wants to develop copper mine.

Residents want control

Meeting planned

The U.S. Forest Service, which is reviewing the Plexus mine proposal, plans three meetings to receive public comment. The sessions, all beginning at 7:30 p.m., are scheduled for:

- Sept. 17 in Mill City High School's auditorium.
- Sept. 18 at the Stayton Community Center.
- Sept. 19 at the Salem public library.

According to operational plans that the company has filed with the U.S. Forest Service, the concentrating process would not use cyanide or other toxic chemicals.

Use of cyanide to leach gold from huge mounds of ore has killed wildlife and caused other environmental problems elsewhere in the west.

Plexus officials have said they would spend about $13 million to develop the mine, which would produce 137 million pounds of copper, 40,000 ounces of gold and some silver.

The company calls the mine the Boraxite Project, named for the rare borax minerals that they found at the site.

Officials with the Forest Service and other agencies have said that reviews of Plexus' permit applications should be complete by late 1992. If permits are granted, the mine could be open by late 1993.

Company officials have said the operation would employ about 80 people, including about 65 to be hired locally.

Philip De Dycker, Plexus' environmental consultant, said plans called for construction of a 17.5-mile power line to the site from a substation at Tumble Creek, north of Detroit Lake.

Several miles of the power line could be buried, including the stretch near Opal Lake, which is at the head of scenic Opal Creek, De Dycker said.

The Opal Creek valley, renowned for tall trees and rushing water, is about three miles east of the proposed mine site.

The mine would be expected to operate for about eight years.

But Gordon said company geologists thought that other copper deposits—remnants of the Cascades' fiery volcanic origins—might be nearby.

If ongoing testing confirms such deposits, he said, they would be reached from the same network of tunnels.
Valley residents urge controls on canyon mining

By Dan Postrel
The Statesman Journal

Local residents made clear Thursday night that they expect a Utah company to keep its environmental promises if it develops a copper mine in the Cascades east of Salem.

"I have seen the terrible devastation that the copper companies have left in Arizona — laying waste whole valleys," Ellen Lindholm of Salem told officials from Plexus Inc.

That destruction must not be repeated along the banks of Cedar Creek, a tributary of the scenic Little North Santiam River, she said.

Her comments came during the last of three public meetings that Plexus organized to present its proposal and to answer questions from the public.

The company has pledged to dispose of most of its wastes underground and to restore topsoil and vegetation on wastes left above ground.

Robert Murray of Independence said the company should set up a trust fund, in the amount of its expected profits, to ensure proper reclamation.

"That, he said, would "guarantee that, in case you disappear in the woodwork, us taxpayers aren't stuck.""
Mining plan draws favor

By The Associated Press

MILL CITY — Mill City residents gave a friendly reception to a plan by a mineral company to develop a copper mine in the nearby Willamette National Forest.

About 40 people showed up Tuesday night for the first of several meetings that Plexus Inc. is holding to gauge public reaction to its proposed Bornite Project, a 1,000-foot-deep underground mine.

The mine, which could open in 1993 if necessary permits are granted, would employ about 80 people, about 65 of whom would come from the Mill City-area work force.
Old Hammond Building
To Be Fully Occupied

The Mill City City Council approved, for city attorney, James McGeehe, to draft a contract to rent another portion of the Hammond Building to Plexus Corporation at the last regular city council meeting, which was held on August 28th.

Building Commissioner, Grant Merrill, reported that the portion of the Hammond Building, where the old U.S. Bank used to be housed, is the proposed site to be rented by Plexus on a possible two year contract. The proposed contract would cite rent at $275 per month. Merrill remarked that he considered the assessed value of the building, current property taxes for the building, and an estimated amount needed for maintenance, when considering the rental price. Merrill suggested that the rental money be placed in the building fund and earmarked for needed repairs to the Hammond Building. The anticipated annual revenue from the rental agreement could result in $4,000 a year for the city.

With the increased rental space with Plexus, the Hammond Building will be 100 percent filled. The North Santiam Historical Society has been housed in the Hammond Building and storage space upstairs in the building has been made available to the Mill City Gates A---
Public will get say on canyon mine

By Dan Postrel
The Statesman Journal

The public will have several opportunities this month to comment on a Utah company's proposal to dig a copper mine in the Cascades east of Salem.

Plexus Inc. is holding town hall meetings, and the U.S. Forest Service plans several sessions later this month.

At issue is a planned 1,000-foot-deep mine along Cedar Creek, a tributary of the Little North Santiam River. The site is in the Willamette National Forest about 50 miles east of Salem.

The U.S. Forest Service and several state agencies are reviewing permit applications for the project.

Bill Funk, the Willamette Forest's Detroit district ranger, said the agency plans to hire a consulting firm to write an environmental impact statement on the proposal. A company should be chosen for that job later this year, he said.

In the meantime, the Forest Service will hold public meetings Sept. 17-19 in Mill City, Stayton and Salem.

A Tuesday night meeting in Mill City, the first of three sessions organized by Plexus, produced no public criticism of the plan.

Members of the public, however, had several questions, including how explosives, used to open tunnels in the mine, would be transported.

Allen Gordon, a Plexus vice president, said explosives' ingredients would be hauled separately, to be mixed only at the mine.

Answering another question, company President Art Ditto said he doubted that a sudden drop in copper prices could force the mine to close before the ore is exhausted.

"There’s always risks, because we're dealing with market forces that say, 'This is the market price,' and you don't have much control over that," he said.

But the ore at the proposed mine site is of relatively high quality, allowing the company to keep production costs below industry averages, he said.

About five trucks a day would carry copper concentrate away from the mine, which would operate for eight years, officials said.

Some gold and silver also would be produced.

The ore would be extracted from underground tunnels, in contrast to open pit mining, in which huge amounts of soil and rock are stripped away. The operation would be the state's largest underground mine.

Officials have said that half or more of the wastes left after ore processing would be disposed of in the tunnels.

Mill City greets plan for copper mine, jobs

By Dan Postrel
The Statesman Journal

MILL CITY — Local residents gave a friendly reception Tuesday night to a minerals company's plan to develop a copper mine in the Willamette National Forest near here.

About 40 people attended the first of several meetings that Plexus Inc. is holding to gauge public reaction to its proposed Bornite Project, a 1,000-foot-deep underground mine.

"We just aren’t drawing any ire," Chuck Bennett of Gates, the Utah company's public relations consultant, said.

The mine, which could open in 1993 if necessary permits are granted, would employ about 80 people, about 65 of whom would come from the local work force.

"They’ve got it pretty well thought out," Tom Fencl, co-owner of a small logging company, said. "It would be good for the community, because logging is going to take a step down."

The North Santiam Canyon’s economy depends largely on national forest timber harvests. But those harvests are expected to shrink in coming years as forest policy shifts toward recreation, wildlife protection and other non-timber values.

Meetings

Public meetings on the Plexus Inc. mine proposal are scheduled for tonight in the Elkhorn Fire Station and Thursday night in the Salem Library Auditorium. Both will begin at 7:30.
Mining company courts Mill City

MILL CITY (AP) — Mill City residents gave a friendly reception to a plan by a mineral company to develop a copper mine in the nearby Willamette National Forest.

About 40 people showed up Tuesday night for the first of several meetings that Flexus Inc. is holding to gauge public reaction to its proposed Bornite Project, a 1,000-foot-deep underground mine.

The mine, which could open in 1993 if necessary permits are granted, would employ about 80 people, about 65 of whom would come from the Mill City-area work force.

The North Santiam Canyon’s economy depends largely on national forest timber harvests, which are expected to shrink in coming years as forest policy shifts toward recreation, wildlife protection and other non-timber values.
Meetings on mine
to provide details

MILL CITY — Plexus Inc. this week will start two rounds of public meetings on its proposed copper mine northeast of Mill City.

An open house will begin at 5:30 p.m. Tuesday at the Plexus office in the former U.S. National Bank building on Wall Street in Mill City. Company officials will be on hand, and hot dogs and soft drinks will be served.

An informational meeting, including a slide show, video tape and talk, will start at 7:30 p.m. Tuesday at Santiam High School. Company, state and federal officials will attend.

Informational meetings also will be held at 7:30 p.m. Wednesday at the Elkhorn Fire Substation and at 7:30 p.m. Thursday at the Salem Library Auditorium.

Plexus officials said they were holding the meetings this week to give residents information to consider before the U.S. Forest Service holds "scoping" meetings later this month.

The scoping meetings will let the public voice any concerns about the proposed mine, according to Mike Hernandez of the Detroit Ranger District of the Willamette National Forest, mine project coordinator.

The Forest Service is requiring an environmental impact study of the mine's effects on the area, and the scoping meetings are part of the process. Other meetings will be held as the project progresses.

The Forest Service expects to award a contract for the one-year impact study shortly, Hernandez said last week.

Plexus will pay the cost, and the Forest Service will oversee the work.

The scoping meetings, each at 7:30 p.m., will be at Santiam High School in Mill City on Tuesday, Aug. 17; Stayton Community Center, Wednesday, Aug. 18; and the Salem City Library, Thursday, Aug. 19.

People who cannot attend the scoping meetings and want to send written comments or who want to be put on a mailing list for updates on the mine project may write Mike Hernandez, Detroit Ranger District, HC 73 Box 320, Mill City, 97360.
Fifteen years after test drilling began Plexus for a subsidiary of Salt Lake City-based Plexus Resources Corp. is seeking permits to dig the mine. Gosson was interviewed at the Plexus office in Mill City last week.

Public informational meetings on the mine will start next week (please see related story).

The planned underground mine is on Cedar Creek in a second-growth area of the Willamette National Forest 12 miles northeast of Mill City. It is about three miles southwest of Opa1 Creek and four miles southeast of Shiny Rock Mining Co.'s Ruth Mine; the only mine still active in the area.

Plexus aims to start construction in spring 1991. During the eight-to 10-year life of the mine, 32 acres of the surface will be disturbed in order to make way for a mill, other buildings, settling ponds and tailings piles.

Reclamation will begin during mining. After the mine closes, all buildings will be removed and the site fully reforested.

Half the tailings (the rock remains after the copper is extracted) will be spread on the site and later placed over them before replanting. At the Boronite Project, tailings will be a gray calcite, mica and quartz sand that looks like beach sand.

The mineral deposit at the proposed mine is a three-foot column, and open pit mining will not be used.

Once the holes into the Earth will be visible at the site, Gosson said the mine portal will be a 13-by 16-foot opening for the ramp tunnel into which rubber-tired, diesel-powered loading and hauling vehicles will drive. The mine also will have a 16-foot-diameter ventilation shaft that can double as an escape hatch.

Water will shake loose ore inside the mine.

All processing at the site will be in enclosed buildings to minimize noise. People should be able to walk in normal voices outside, Gosson said. Trucks with a water solution will keep dust down.

Dump trucks will haul 26-inch chunks of ore, averaging 20 percent copper, from the mine to a rock crusher. A conveyor will take the half-inch crushed rock to a storage bin or a mill. In the mill, steel balls will grind the rock into a coarse sand in big drums.

Next, froth flotation tanks will separate copper-rich ore from the rest of the rock. Gosson likens the process to removing dust from clothes by washing them in detergent.

At the mine, a small amount of lime, a phosphate, a phosphate collector, will be added to the water in the tank with the ore. Air will bubble up through the water. Copper clings to the collector chemical. and the copper-rich mixture floats to the surface in froths. The froth is caught in troughs and filtered.

The result is a preliminary concentrate, 32.6 percent copper, considerably above a typical 20-25 percent concentration. In the concentrate, besides copper there are some gold, silver and molybdenum. The concentrate will be trucked to Portland or Vancouver, Wash., for shipping in a shelter paying the best price. Today, that would be in Korea or Japan.

No cyanide or other toxic chemicals will be used in any process at the mine. Water draining from the tailings will meet federal drinking water standards, Gosson said.

The mine is designed for a copper price of 57 cents a pound, but would be economic to operate at a price as low as 65 cents a pound. Gosson said the copper has been higher than the 65-cent level for 10 years, he said.

A geological feature of the site friendly to mining assures there will be no acid runoff. Gosson said abundant calcite and dolomite in the ore will immediately neutralize any acid. That is one fact turned up from test drilling over more than a decade. It has yielded 45,000 feet of 2-inch core samples at a cost of $1 million.

Half the tailings will be burned above the surface and other ecological sense, Gosson explained.

During the first stage of reclamation, rock must be left in place to give rise to new plant.

After the initial stage of reclamation, sandy tailings will be more cement and used to fill the dug-out areas.

After the cement mixture hardens in concrete, the adjoined pillars of rock must be left in place to give rise to new plant.

The mine will not generate any gases, so no canaries will be needed for the methane-buildup.
Plexus Inc. gives facts, figures on Bornite Project

Location: On Cedar Creek in the Willamette National Forest in Marion County, 12 miles northeast of Mill City, five miles east of Elkhorn.

Mineral deposit: Copper mineralization of 2.2 percent in 3.5 million tons of bornite and chalcocite ore.

Life of mine: Eight to 10 years.

Estimated yield: 137 million pounds of copper; 45,000 ounces of gold; 1.5 million ounces of silver; some molybdenum.

Type of mine: Underground.

Deposit shape: Cylindrical vertical rock formation more than 1,000 feet long, 400 to 450 feet in diameter, narrowing toward the surface.

Area: 32 acres of second-growth forest, of which 20 acres would be disturbed on the surface.

Mine depth: More than 900 feet.

Site operations: Digging, crushing, mill grinding; concentration in froth flotation unit.


Workers: 75 to 80 miners; up to 100 workers during construction.

Pay: $10 to $15 per hour base wage; annual operations payroll, $2.5 million.

Reclamation: Replanting of site; no acid runoff; no cyanide or other toxic chemicals used.

Plexus Inc.: A unit of Plexus Resources Corp. of Salt Lake City, Plexus Resources, founded in 1980, is a Canadian corporation operating only in the United States. It listed $29 million in assets as of March 31 and hopes to achieve its first profit in 1991.

It has partnerships in gold, silver and copper mines, mainly in Nevada, California and Montana, and in gas and oil wells. The Bornite Project will be its first wholly owned and operated mine.

Founder, president and chief executive of Plexus is Arthur H. Ditto, 50, a former Anaconda Co. employee.
The North Santiam Canyon Supports and Welcomes plexus, Inc. to Our Communities

plexus, Inc. is proud to bring to the Santiam Canyon the Bornite Project. The Bornite Project is an example of mining the right way - the environmentally sound way.

If you are interested in learning more about plexus' Bornite Project, please attend their Open House on Tuesday, September 3, 1991 at 5:30 p.m., at their Mill City office. There will also be a presentation at 7:30 in the Santiam High School auditorium following the open house.

These businesses support and welcome plexus, Inc. to their communities
Plexus Geologist
To Speak at
NSHS Meeting

History in the making will be the subject of the program at the September meeting of the North Santiam Historical Society. Greg Gossen, geologist with Plexus Mining Company, will explain the way mining is to be done at the close of the twentieth century.

Plexus will be mining copper and other metals near the site of the nineteenth century North Fork mines. Previous NSHS programs told of the early mines and of the miners, whose base for supplies, assaying and other needs was at Gates.

The meeting will be on September 5th at 7:30 p.m. in the Middle School library. Refreshments are served between the program and the business meeting. President John Lengacher, whose illness prevented him from attending the August meeting, will preside, and reports will be heard concerning the room at the bank and other projects.

Visitors and new members are welcome. Members who have not yet received their membership cards can pick them up at the meeting from membership secretary Phyllis Shelton.
Copper mine officials explain canyon work

MILL CITY-Plexus Inc., the firm planning an underground copper mine near Cedar Creek, will hold three community meetings in September to provide citizens with information on the project.

Meetings are scheduled to be held in Mill City, Elkhorn and Salem.

The Mill City meeting is scheduled from 7:30 p.m., Sept. 3 in the Santiam High School Auditorium.

The meeting will follow a 5:30 p.m. open house at the company office in the old U.S. Bank building on Wall Street.

The open house will give people an opportunity to see the local Plexus office, talk with company representatives and mine officials. Refreshments will be served.

The Elkhorn meeting is set for 7:30 p.m., Sept. 4, in the Elkhorn Fire Substation. The meeting is to give Elkhorn and Little North Fork residents a chance to discuss in detail the mining operation and the impact it will have on the local area and residents, according to company officials.

The Salem meeting will be held 7:30 p.m., Sept. 5, at the Salem Library Auditorium.

Each meeting will include a slide show, video tape and presentation by mine officials on the geology, mining project and reclamation and environmental protection plans.

The presentation will be followed by an extended question and answer session to give everyone a chance to review their questions with mining or government officials. The company plans to have representatives of the U.S. Forest Service and Oregon Department of Geology and Mineral Industries present.

Alan Gordon, Plexus' Vice President for technical services, said the Bognite Project calls for a modern underground mine with an adjacent mill site that will disturb only about 32 acres of second growth forest near Cedar Creek.

He said that no old growth timber will be affected and that access is planned along existing Forest Service roads.

The mine is expected to produce about 137 million pounds of copper with substantial amounts of gold and silver.
Firm will tell public about canyon mining plan

By Dan Postrel
The Statesman Journal

Plexus Inc. officials have scheduled community meetings in Salem, Mill City and Elk horn to discuss their proposed copper mine in the Willamette National Forest.

The U.S. Forest Service and other agencies are reviewing Plexus' proposal for an underground mine in the Cedar Creek valley, about 50 miles east of Salem.

Cedar Creek is a tributary of the Little North Santiam River.

Each meeting will include a slide show, a question-and-answer session and presentations on mining and reclamation plans.

Community meetings set

Three community meetings, all starting at 7:30 p.m., are scheduled for:

- Sept. 3 in the auditorium at Mill City's Santiam High School.
- Sept. 4 in the Elk horn fire station.
- Sept. 5 in the auditorium at the Salem library, 585 Liberty St. SE.

Officials from the Forest Service and the Oregon Department of Geology and Mineral Industries also might attend, company officials said.

In addition, the company has scheduled an open house at its Mill City office, located in the old U.S. Bank Building on Wall Street. The open house, which will provide an opportunity to talk to company officials, will begin at 5:30 p.m.

The 1,000-foot-deep mine, which the company calls the Bornite project, would produce about 137 million pounds of copper, along with some gold and silver.

The project would employ about 80 people; 65 could be hired locally.

About 32 acres of surface development would be involved, and most of the wastes would be disposed of underground, company officials said.

Government officials have said that reviewing Plexus' applications could take about two years.
Meeting set Sept. 3 on proposed mine

MILL CITY — Plexus Resources Corp., which is planning an underground copper mine in the Cedar Creek Valley northeast of Mill City, will hold an open house and informational meeting Tuesday, Sept. 3.

The open house will start at 5:30 p.m. at the Plexus office in the former U.S. National Bank building on Wall Street in Mill City. Company representatives and mine officials will be on hand. Refreshments, including hot dogs and soft drinks, will be served.

The public meeting will be at 7:30 p.m. at the Santiam High School auditorium. A slide show, video tape and presentation by mine officials will precede a question-answer session.

The U.S. Forest Service and state Department of Geology and Mineral Industries will have representatives on hand to answer questions.

Informational meetings also will be held at 7:30 p.m. Sept. 4 at the Elkhorn Fire Substation and at 7:30 p.m. Sept. 5 at the Salem Library Auditorium in Salem.

Allen Gordon, vice president for technical services for Plexus, said the underground mine would disturb about 32 acres of second-growth forest near Cedar Creek. No old growth trees will be affected, and the project will use existing U.S. Forest Service roads.

The mine will extract bornite, a copper ore, as its primary product, and is expected to produce 137 million pounds of copper over eight to 10 years. “Substantial amounts” of gold and silver also are expected.

Capital cost for the mine is estimated at $13 million.

More than half the tailings will be returned underground, the company said. The rest of the tailings will be spread on the surface and planted. Reclamation will be done throughout the life of the project.

About 80 people will work full time at the mine, and 20 more will be needed initially for construction.

Plexus needs to receive several permits before the project can begin.
Plexus, Inc. to Hold Community Meetings

Plexus Inc. recently announced it will hold three community meetings to provide information to interested citizens on its Bornite Project underground copper mine 50 miles east of Salem in the Cedar Creek Valley.

Meetings are scheduled to be held in Mill City, Elkhorn and Salem.

The Mill City meeting will be held on September 3rd in the Santiam High School Auditorium at 7:30 p.m. The meeting will follow an open house at the company office in the old U.S. Bank building on Wall Street. The open house will give people an opportunity to see the local Plexus office, talk with company representatives and mine officials. The event also will include soft drinks, hot dogs and chips and will begin at the office at 5:30 p.m.

The Elkhorn meeting will be on September 4th at 7:30 p.m. in the Elkhorn Fire Substation. The meeting is to give Elkhorn and Little, North Fork residents a chance to discuss in detail the mining operation and the impact it will have on the local area and the residents.

The Salem meeting will be at the Salem Library Auditorium on September 5th at 7:30 p.m.

Each meeting will include a slide show, video tape and presentation of mine officials on the geology, mining project and reclamation and environmental protection plans. The presentation will be followed by an extended question and answer session to give everyone a chance to review their questions with mining or governmental officials. Plans are to have representatives of the U.S. Forest Service and Oregon Department of Geology and Mineral Industries present.

Plexus' vice-president for Technical Services, Allen Gordon, said the Bornite Project calls for a modern underground mine with an adjacent mill site that will disturb only about 32 acres of second growth forest near Cedar Creek. He said that no old growth timber will be affected and that access is planned along existing Forest Service roads.

The mine is expected to produce about 137 million pounds of copper with substantial amounts of gold and silver. Over half of the tailings will be returned underground with the remainder being recontoured to blend with the area's natural surroundings and then revegetated. Reclamation will be underway throughout the project's planned eight to ten year life.

About 80 people will be employed full-time throughout the life of the project with an additional 20 employees during initial construction. Most hiring will come among local residents with experience in the timber industry.

Plexus will be required to successfully receive a number of permits before the project can begin, including permits from the Forest Service, Oregon Department of Geology and Mineral Industries and Department of Environmental Quality.
Copper mine proposed east of Salem

The Associated Press

SALEM — A Utah company is proposing to dig a 1,000-foot-deep copper mine in the Willamette National Forest east of Salem, about 2½ miles from scenic Opal Creek. The project would provide about 80 jobs for at least eight years, producing about 137 million pounds of copper.

Officials with Plexus Resources Corp. of Salt Lake City said about 65 of the workers could be hired from the economically depressed timber towns of the North Santiam Canyon.

Ore would be extracted from tunnels, in contrast to open pit mining, in which topsoil is scraped away.

The operation would be the state's largest underground mine.

The proposal faces at least two years of environmental study by the U.S. Forest Service and state agencies.

The mine would be in the Cedar Creek valley, about 50 miles east of Salem. It is flanked by undeveloped areas prized for their towering trees, scenic views and rushing water.

Over a ridge to the east is Opal Creek. Its old-growth trees have become a national symbol of the fight over logging in the Northwest's national forests.

Cedar Creek, however, does not have the pristine quality of the neighboring valleys.

"It's the only part of that whole area that has been roaded and cut," said George Atiyeh of Gates, the best-known opponent of proposals to log Opal Creek.

Plexus acquired long-term leases on mining claims in the area in 1989 from Cyprus Minerals Co. of Denver.
Copper mine proposed for Elkhorn

by Francis Dairy

For The Stayton Mail

MILL CITY - A mining operation, expected to produce 137 million pounds of copper, has been proposed at a site near Cedar Creek Valley north of here.

Plexus Inc., a Salt Lake City-based mining company, last month gave the U.S. Forest Service a plan of operations for the mining project located in the Willamette National Forest.

Plexus is in the process of applying for permits from the Oregon Department of Geology and Mineral Industries, Department of Environmental Quality and the U.S. Forest Service, said Plexus spokesman Chuck Bennett.

Some time in the next few weeks, Plexus plans to hold a public meeting to "bring everyone in the canyon up to speed," said Bennett. "This is a flat out excellent project. They're doing this right. It's a model project.

Charles Scott, caretaker for the old Elkhorn Post Office, 1/4 mile from the national forest, called the Little North Fork, he said, "and I don't see how it is possible to avoid drastic environmental impact."

"We have to be concerned about getting rid of the mountains of dirt left over when they get the ore out."

No other opposition has been voiced yet, said Scott.

Plexus is presently working two shifts a day, seven days a week, doing exploration drilling, said Allen Gordon, vice president of Plexus Inc.

Full scale operations will probably not commence for at least 18 months, according to the U.S. Forest Service, which will require environmental impact statements.

Known as "The Bornite Project", it will last at least eight years and is expected to produce...