

Video Transcription

Workers of the Mine and Concentrator

Interview Subject: Alan McNair

Section: Introduction

My name is Alan McNair. I was hired on in Vancouver at the Royal Bank Building at Granville and Eighth. That was the hiring office. They sent me up here on the Bonabell, that was from Horseshoe Bay and landed on the dock. They took us up the hill to the townsite, went through the hospital up there and had our medical. Then they took us to where we would work - the townsite or down at the beach. I worked at the townsite - at the Victoria mine - that's where I worked.

Interview Subject: Alan McNair

Section: Working Conditions in the Mine

The air underground was not too good. Some places, the oxygen content was very low. I worked in one place where the oxygen level was so low, you couldn't light a match. You had to put three matches together. So, we would get into the stope (the working areas of a mine) and as soon as you got there you would turn on the air flow. So, while you are drilling, you are breathing the same air that is going through the machine and there is a lot of oil in it. Back when I first started in 56, they had no such thing as ear muffs, safety glasses, ear plugs, none of that. So it didn't help the hearing too much.

Interview Subject: Alan McNair

Section: Copper Mining Safety

The mine was just as safe as you want to make it. Mind you, there was just a few real tragedies. Most of the deaths at the mine were caused by the person themselves. Stupidity in some cases.

Interview Subject: Alan McNair

Section: Memories of the Community

Everybody knew everybody. Everybody would help everybody. We made our own entertainment. In fact, for two years I was entertainment chairman. We put dances on, we handled our own liquor, we had to get a permit from the police to bring liquor in. And you were only allowed so much per man. You can't stop a miner with what they wanted to give. I think it was two hard drinks and three beers per man. You gotta get a permit for it. So, you had to go over to the police station and apply for the permit. And they made you the official for the night. You could throw anyone out or arrest anyone. They wanted to know how many people are going to be there. We always figured about a hundred or a hundred fifty at the outside so I would always apply for five hundred.

Interview Subject: Alan McNair
Section: What is Copper Water

Copper water is the acid water after the water runs over the ore. It picks up, I don't know what it is you call it. It leaches and picks up the acid out of the ore. Then it calls copper water, we used to just say it was hot. Then is a chemical reaction. When you run it over tin or metal, steel or iron or one thing or another it would pull the copper bugs out and turn it back to copper. That's what they call leaching. They had a plant there that would be leaching and they would pull I don't know how many pounds a day. But it kept one man steady and they were making straight profit off of that.

Interview Subject: Alan McNair
Section: Thoughts on the Company

I don't owe the company anything and they don't owe me anything. They paid me for what I did - or somewhat - they never paid proper. They were always trying to beat us. They never paid for what they got. But, I never made big money, I never got rich, but I never went hungry, my kids got their education.

Interview Subject Alan McNair
Section: Shift Work Explained

Shifts there would run from seven to three - day shift. Three to eleven - afternoon and eleven to seven - graveyard. The shift consisted of eight hours from portal to portal. You went in and you had to be back out inside of eight hours. I believe the law said eight hours was equivalent to twelve hours on surface. If they wanted to work you any more than that, they had to get a special permit.

Interview Subject: Alan McNair
Section: Community Camaraderie

Camaraderie around that time - if you went away for two weeks holiday, you never locked your doors. When you come home, someone had come in and had watered your plants, they cut your grass, weeded your garden, that was it. Now, if you want to go to the post office, you gotta lock the bloody door. You don't know who's around here now.

Interview Subject Alan McNair
Section: Final Thoughts

As a miner, when you go to work you are your own boss. It's true they tell you what your objective is, but you do it your own way. Mr. Bonus was the only guy pushing you. It was a job. Some people have claustrophobia, you couldn't go underground. My wife was one of them. She joined the war, she was on searchlights and she got buried one time. That finished that. It never seemed to bother me. I started working underground at Nickel Plate in Kennedy and I had never been underground in my life before. I don't want to be there again. I have left instructions I want to be cremated.

Interview Subject: Will Trythal
Section: Introduction

My association with Britannia started in 1946, and I was going to private school in North Vancouver and after the war and dad got out of the army and ended up working at Britannia, and in the spring of '46 my mother had moved up and rather than leave me at my grandparents place in North Vancouver, I left private school and came up here. I guess it was that legacy of having lived at Britannia, I had an interest in the mining industry, and consequently decided that maybe a career in the mining industry would be great and so off to UBC and registered in engineering, and oh part way through schooling stayed out of school for a couple years and actually worked underground at Britannia for a year and a half. I guess that was the summer of 1960 and through that winter and through the next summer.

Interview Subject: Will Trythal
Section: Summer Job in the Mill

And Jack said to me well we don't have a grinding operator but you should be smart enough, you know he was a bit sarcastic, although his son was a chemical engineer and with him I, in my year, and he said well I think we could make you a grinding operator, so there I was at 4 o'clock in the afternoon, and I was the grinding operator, and he was amazing because there were only 4 people in that part of the mill, exclusive of the crushing circuit on the upper levels, and well you just learned the hard way. The old conveyor belts to the rod mills were driven by overhead pulleys, and they said well here's a club if you want to speed up the belt you flip this belt from one pulley to the other, and of course I had that wrapped around my neck pretty quickly, and I remember Jack coming up and saying well you're learning the hard way and I say ya I sure am, now I say you gotta clean up all those spills that you made, so it was good times it was a good summer needless to say I lost weight because in that old concentrator there were two rod mills and the conveyors coming out from underneath the fine ore bins, and two rod mills and I think there were 14 ball mills and you had to do your own lubrication of the babbot bearings and it was just an exciting time and there were only 4 people in the mill.

Interview Subject: Will Trythal
Section: Mill Stages

Up in the upper part of the mill, trains coming out from the 4100 portal would put the coarse ore into five coarse ore bins. During the day shift, they operated a crushing circuit up there to reduce the material to the size of minus one inch material. And that material was then conveyed into what I refer to as the fine ore bins. From there, that fine ore was transported by conveyor - I have talked about conveyor drives - the material went into two rod mills. Out of the rod mills it was a very coarse grind, sort of a coarse sand product out of the rod mills. And then it was split into balls. The material coming out of the ball mills was the consistency of fine sand. From there it went to flotation cells. Britannia is famous for the deep Britannia cell where the rougher concentrates were

produced. It was amazing because Britannia produced that summer, five different products. It produced a copper concentrate, a zinc concentrate, we produced pirates concentrate, the lead circuit wasn't running, it was not operational because we required the ore body to have a high lead content. And then the tailing were put over blankets and the coarse gold was recovered in the blankets.

Interview Subject: Will Trythal

Section: Mill Waste Products

The other product we should talk about ... ok, there is a lot of ground up waste and where did it end up. Well, as a slurry it went on a launder right through the town site to Britannia Creek. It went past the old clubhouse and the store, and there was sidewalk and up above it was a wooden launder up in the air, maybe 16, 20 feet up and then it just poured into Britannia Creek. And it had done that almost since day one.

Interview Subject: John Lovering

Section: Introduction

My name's John Lovering, I was at Britannia Beach from 1970 to 75. I came there as the Assistant Mill Superintendent and went to Mill Superintendent and General Manager. I was the General Manger at the time of closure.

Interview Subject: John Lovering

Section: Mineral Extraction Explained

In general terms we received the underground ore from the mine on the 4100 level and the track went in at the top of the mill and the ore was dumped into ore bins which in turn fed a jaw crusher and then secondary crushers through a screening plant, and the product from this crushing plant which was at the top of the building was then delivered by conveyor belt to a series of fine ore bins and the crushed ore bins and the ore from these bins was then drawn as required into the grinding circuit.

The first stage grinding were two rod mills in parallel, they were 8ft X 12ft rod mills, I think they were about 500 horse power. From the rod mills we went into the bore mill, secondary grinding circuit, which I talked about modification before. Initially they were bore mills in closed circuit with mechanical classifiers. We removed the mechanical classifiers and put cyclones in amongst other things we did in the modernization of the circuit, and we ended up being able to grind with far fewer mills. The classifiers are used to make a separation according to size, so when the material is delivered to the classifiers, it's sandy material, by this time it's been ground down to a coarse sand, the coarse material, the classifiers were like enclawing troughs, and when the material is fed in it's fed in at the lowest point in the trough, and you have a good deal of water in with it, the coarse material settle down to the bottom, and are scraped to the top of the trough, and the material then is at a height which it can be delivered back into the bore mill, so it gets re-ground in the bore mill, the fine material doesn't settle as well and flows out over the weir at the bottom of the classifier, the lower end of the classifier, so you make a

separation between coarse and fine and the operator will make adjustments to make sure that the cut point is what you need, so you don't want it too fine, and you don't want it too coarse.

If it's too fine you're going to have slime sources later in the process, if it's too coarse the valuable constituents of the ore aren't liberated from the waste material in the ore. So the whole thing as far as the crushing and grinding circuit is concerned, is to take the ore from underground, and break it down into particles that are fine enough, that you can say this particle is either waste or value. If it's a value we want to concentrate it and that will go to the smelter. If it's waste we want to reject it; So that the whole purpose here is to reduce it to a size where we can make that determination, in fact if you were going to do it under a microscope you would be able to pick out particles of calcopyrite, copper mineral, and particles that weren't calcopyrite, now obviously that's not a satisfactory way of doing it on a large scale, that is what you are trying to do, make it possible to make that separation, so that's down through the grinding circuit. The classifier is in closed circuit with the bore mill. You make the separation, the coarse material goes back into the bore mill, after grinding, it goes back in the classifier, and if it's still coarse, it goes back in the bore mill, as certain material gets ground finer and finer then that goes onto a process section of the plant; so that's down through crushing and grinding.

The process that we use for separation with floatation, and although the floatation cells that we had at that time, would barely be recognized by most metal agencies that you see today, the principles were the same. What you do is you add agents to the ground product, that will selectively water-proof the valuable particles of calcopyrite. That means they are in a slurry and put into a vessel of some type and air is either then blown up through it or sucked in through it and as these bubbles come to the surface, the particles that are water-proofed tend to stick to the air bubble rather than to the water and you end up with bubbles covered in the mineral that you are trying to collect and if you also add another chemical, a frother, it stabilizes the bubbles so when they get to the surface you get a froth that doesn't break down, and then you skim that froth off and it contains the valuable mineral and that's the basis of a froth floatation, and I don't know exactly what the percentage of minerals that are collected by froth floatation it's probably well over 80 maybe 90

Past Residents of the Britannia Community

Interview Subject: Marilyn Rob

Section: Introduction

Hello, my name is Marilyn Rob, my maiden name was Adamson. My family came to Britannia in 1924; My grandparents Bill and Janet Adamson with my dad Mort and his sister Lila and we were always at the beach we did not live at the townsite. I was born here in 1947 and we left in 1964.

Interviewer: What did your parents do here and what brought your family?

My grandfather was the accountant in the store, and my dad was an electrician, and my mom worked in the store office for Britannia mining and smelting, later in the store office for Don McGregor and for a short time in the general office.

Interview Subject: Marilyn Rob

Section: Memories of a Childhood House in Britannia

That house down on the flats really holds particular fondness, I can still draw a floor plan of it. It was a 2 bedroom house with no central heating you had a wooden coal stove and that provided your heat. Out the back my dad had his area, his shack or as my mother called it his dog house where he made his legendary homebrew and all his friends would come over and listen to Hockey Night in Canada. I think the first words out of my mouth when I was learning to speak were he shoots he scores because that was my dad's domain out there.

Interviewer: Where exactly are the flats?

We were right across from the old hospital(it's gone now), where the foot bridge is towards the north end.

Interview Subject: Marilyn Rob

Section: Special Memories of Britannia

For much of my early years we were isolated here and yet we were so self sufficient within the community. We had a top notch library, there was an art club, there were athletic teams, we were just so self contained. Somebody once asked me whether I felt that I'd missed out on anything. I really didn't. We had it all here.

Interviewer: So you didn't go to Squamish very often?

No not until I went to high school, but I learned so many valuable lessons in this town at an early age. I learned to be resourceful, I learned to be terribly self-reliant, and I developed a genuine interest and a high regard for other people. Those lessons have really served me well over the years, and I've learned them here.

Interview Subject: Elizabeth Mitchell

Section: Introduction

Hi my name is Elizabeth Mitchell, my maiden name was Vallens? I lived at Britannia from 1940-1958. My maternal grandparents arrived in Britannia in April of 1914 with my mother and my aunt. My grandfather went to Britannia to work in the mill, so that's why they moved there. My father came to Britannia in 1926 where he was hired as an electrician and actually sort of apprenticed there on the job.

Interview Subject: Elizabeth Mitchell
Section: The Flood of 1921

My family they lived in a house which was down on the flat sort of down where the museum is sitting now , in that area, and they heard this roar and water started coming in the house and we had an oak dining room table that had a pedestal in the centre and a round table on the top and my grandmother was very short, so my grandfather picked her up and put her on top of the table and this great log apparently came crashing through door and smashed right into the pedestal of the table, and if that table and the pedestal hadn't been right there, there probably would have been injuries if not death's in the family; and then they couldn't get out of the house, and a fellow who lived across the road from them, whose name was Carl Berg, had a boat and what he did is he brought the boat over, and he went up on the roof and he chopped a hole in the roof, and my mom and aunt and grandmother and grandfather got up to the roof and out through the hole in the roof, and my aunt says that a number of the houses that were swept out into the sound, many of them, she remembers hearing kids calling from being out on the sound, and apparently the family that lived next door to them, the whole family died in the flood; and apparently those that survived all were taken to the general manager's house where they got fed and dried out and so on, then they all had to move to Vancouver because there was no place to live and one of the stores in Vancouver, I can't remember the name of it, gave all of the women, who were flood victims free dress so that they would have something to wear and my aunt and my mother were considered old enough to get a ladies dress so they each got a ladies dress too.

Interview Subject: Elizabeth Mitchell
Section: Copper Queen Celebration

The copper queen celebration started in the early 20's and it was a celebration on the Queen's birthday the 24th of May and so instead of calling it a May queen they called it a copper queen, because of course copper was the major product of the mine, and they would vote the copper queen from the class of student's. When I was copper queen I was just 11, I was in grade 6, but they were a little bit older in the years before that and the student's in the school would vote for the copper queen, and so it was a major major celebration and what I remember even as a small child when it came to the copper queen celebrations and ceremonies they used to have this wonderful, like a band stand, except the copper queen was on it and you'd go around to all of the houses with great big boxes and collect all of the fresh flowers that people had grown in their own gardens and the back of the band stand would just be alive with these fresh flowers that members of the community club would get and put together before the ceremony started in the day. When you stood up there I remember that the scent of the fresh flowers was just wonderful, and then of course you'd have the dance in the evening and the first half of the dance would be for the youngster's, and then the youngster's went home at nine o'clock and the band had a recess and the adult's carried on for the rest of the evening and it was just the whole community collaborated in it and it was just alot of fun.

Interview Subject: Elizabeth Mitchell
Section: Community Living

Britannia was an isolated community but it was a very close community and I think people in Vancouver or away from it didn't realize what we had there. We had very active community clubs, there was always activities going on. We had sports teams, we had wonderful music lessons. We all grew up with an appreciation for music, we had music teachers, there was dance teachers that came up, we had active mine safety, mine rescue teams and therefore first aid competitions and teams like that. It was a really busy community, and there was always a dance once a month, either at the beach or at the townsite, and people I don't think realize that our dad's went in their suits and ties and our mom's dressed to the nines to go to these dances and bands like Mark Kenny, who was just in the paper today I think he's just passed away, his band used to come up and play I mean it wasn't small town stuff at all it was quite a community effort.

Interview Subject: Doris Blundell
Section: Community Living in Britannia

Well it was a wonderful place particularly to bring up children. It was so friendly and everything was geared towards the children, the sports and oh just everything it was just a wonderful place to live.

Interview Subject: Doris Blundell
Section: Struggles of Living in Britannia

You couldn't just pick up and go if you wanted to you had to prepare, and one thing if you were expecting your baby you couldn't stay you had to leave about two weeks before the baby was due and then spend a couple of weeks in Vancouver or wherever you were going before you could come back. It was a rare occasion unless something happened that a baby was born in Britannia.

Interview Subject: Doris Blundell
Section: Symbol of the Mill

Interviewer: Certainly people have thought it ("the concentrator") should have come down off the hill. What would have been lost if the building had been taken down?

The whole history of Britannia, it was the biggest coppermine in the world at one time wasn't it.

Interviewer: Yes, so without the building the history really, would almost cease to be there.

Well it would because then all you'd have is just another village wouldn't you.

Film Footage From the BC Archives & Zero One Design

Section: BC Archives Footage Concentrator 1930's

The film 'Industrial Britannia' (ca.1926) was filmed by Carleton Browning, one of the most important figures in the history of the mine. Browning was the general superintendent of the Britannia Mining and Smelting Company Ltd. from 1917-1948, leading Britannia through its most prosperous period. It was under his direction that the Mill was built; in addition he oversaw a new underground transportation system to replace the old inefficient surface rail lines.

British Columbia Archives, Call Number V1988:34/001, with credit to the Browning Family Collection and the B.C. Museum of Mining.

Section: BC Archives Footage 1932 visit of Earl of Bessborough

In the film entitled 'A Visit to Britannia Mines' (1932) Britannia Beach welcomes The Earl and Countess of Bessborough. Vere Ponsonby, 9th Earl of Bessborough, was the current Governor General of Canada and traveled throughout the country extensively. At the time of the film Britannia Mines was struggling with the low price of copper and the resulting layoffs of 50 of its employees. It was stated after they had left that the trip was not a particularly happy one and did not receive glowing reviews.

British Columbia Archives, Call Number F1989:05/001

Section: Raw Footage Part 1

The ground floor of the Mill on the platforms where the thickening tanks stood. Images were taken during the rehabilitation process and the windows are removed.

Section: Raw Footage Part 2

Floors 1b and 2. Images were taken during the rehabilitation process and the windows are removed.

Section: Raw Footage Part 3

Floor 3 containing the Froth Flotation cells. The footage also moves throughout the many sub-floors.

Section: Raw Footage Part 4

Close up of Froth Flotation cells and a ball mill along with various shots of the middle of building.

Section: Raw Footage Part 5

Close up of ball mill, stairs and skip. Footage of ore bins near the top of the building.

Section: Raw Footage Part 6

On the mountain behind the mill. Includes trestle and views of Woodfibre pulp mill.