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# Interview With Tom Finch

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By Darby Stacey

Questions for Tom Finch March 14th 2002

1) How long did you teach at Montana Tech?
2) Of all the students you taught, how many were Butte natives?
    a) Were the Butte natives more "in tune" with the program?
3) Did you ever curb your curriculum to adjust for mining procedures on the Butte hill?
4) Describe some hands on teaching that you were a part of on the Butte hill.
    a) What were the student's responses?
5) Is there a Butte native that went through your program that really sticks out in your mind?
    a) Describe; who, what, where, when
6) Butte is a great example of the boom and bust of the mining industry. How do you feel about the absence of mining on the Butte hill today?
    a) Did you foresee this decline?
    b) Would you have taught things differently if you had known the extent of decline?
    c) Any foresight into the future of the Butte hill?
7) Other than huge amounts of mineral resources why do you think Butte worked as a mining town?
    a) Were the deposits on the Butte hill unique to all others?
8) Of all your students, how many ended up working on the Butte hill
9) What made you come to Butte?
10) How different would your job had been if you had taught in another town?
11) Why have you decided to stay in Butte?
12) If you could change one thing with the way you taught what would it be?

Outline

I. How long did you teach at Montana Tech?
   a. Started in '66, fired, and rehired two years later.
   b. Retired in 1999
II. How many of the students you taught Butte native?
   a. Lots in the early days, 75% or so
   b. When economy was good there were few Butte kids
   c. Lots of Canadians in the late '80's
III. Did you think Butte kids were more in tune with mining procedures?
   a. They were in the early years because they worked in the mines
   b. This made them easier to teach
IV. Did you do a lot of "hands on" type teaching on the Butte hill?
   a. Just underground surveying classes were held in the mines.
   b. The kids were supposed to get summer jobs to learn that stuff
V. Is there a Butte kid that really sticks out in your mind that you taught?
   a. Billy Williams
      i. Hurt shortly after graduation
   b. John Cora
      i. Bad grades in high school
      ii. Good student in college
      iii. Failed in getting masters degree
VI. How do you feel about the absence of mining on the Butte Hill today?
   a. Not a big deal
   b. The metal prices will swing back up soon
VII. Did you foresee the decline in metal prices and energy?
   a. Companies getting into mining were oil companies and they didn't know much about mining
VIII. Other than the mineral resources why do you think Butte worked as a mining town?
   a. No real reason to have a town here
   b. Politicians pulling strings so things would fall Buttes way
   c. Slowest dying city in America
IX. What do you feel made the deposit on the hill unique?
   a. It wasn't deep
   b. Very high grade
   c. Discovered at pivotal time in history
   d. Massive copper deposits, lots of low grade copper ore
X. Of all your students how many do you think ended up working on the Butte hill?
   a. Not many
      i. Anaconda Co. was cutting back
XI. What made you come to Butte?
   a. Always wanted to be a teacher
   b. Got masters in Idaho
   c. It was a good place to get started

XII. How different do you think your job would've been if you would have taught in another town?
   a. Never had to worry about program being cut
   b. No pressure to do research

XIII. Why did you decide to stay in Butte?
   a. Lots of natural forest, wide open spaces

XIV. If you could change one thing with the way you taught, what would it be?
   a. Could have used more money
   b. The students fared very well after college, so nothing went bad

Interview With Tom Finch

D: How long did you teach at Montana Tech?

T: Well, I started in 1966. I taught three years, got in a big fight with the department head. He fired me and I quit and went back to Wisconsin and taught back there for two years, '69-'71. Then he called me up and said come back and I'll give you a big raise, which was a good thing because I was going to get laid off back there anyway because the declining enrollment, and I didn't have any seniority, so I came back to Butte in '71, so really it's been 31 years in Butte.

D: Of all the students you taught how many were Butte natives, like percentage wise?

T: Well in the old days a lot of them were, the 70's, the 60's and 70's, all the way through the energy boom, na, the energy boom kinda..., but anyhow ya know there were three quarters of 'em were for Butte, or Anaconda, same thing. And then when the big energy crises hit in the middle '70's, it took a while but the salaries got really high then and people became aware of energy and coal and mining and all these things you know, cause there was supposed to be this big lack of petroleum, so there was oil shale in Colorado and coal in Montana, so all the sudden there were more jobs in the west and so then we got maybe only a third or half of the students were by 1980. And the fact is, by 1980 when everybody was really aware of this big crises in raw materials there were, you know, lots and lots of out of state students. So when the mining business falls flat they tend to be Montana students, and when it's fairly poor they tend to be Butte students cause it's an easy place to go. Well you know there were always 75% were from Montana, 25% were, although there were time in the late '80's and 90's when there were

a lot of Canadians, I mean there were tons of Canadians, maybe half the class was. They sort of discovered the school, the guys from British Columbia Ins. Of Technology, BCIT in Vancouver. They would get a two-year degree there, go out and work for a couple years and find out they couldn't be, they didn't treat them as engineers, so then they would come down to here to get a four-year degree, so there were actually years when half the class was Canadian, but not anymore. So, am I answering that?

D: Ya, did you think the Butte native did they seem more in tune with mining procedure in general?

T: Ah, they were dumber

D: Really?

T: No. They ah. I don't know back when the underground mines were still open through the, I don't know '81, '82. When there were still some underground mines then a lot of the Butte kids worked in the mines, cause they knew people so ya you know they were easier to teach cause they had seen a lot of it, but you know it was one of those deals where the worse the economy was the more Butte kids you had coming to school at Tech, cause the couldn't afford anywhere else. The better the economy was the more they would wonder off and go some place else. But you know I don't think the Butte kids were more, well maybe they were they had to be a little better in their conscience a least. The early ones were really had, they all worked in the mines, then the later ones didn't cause the mines had pretty well shut down. A few of the would work at the pit but not very many so early on I guess they were a little more experienced, hell when I first started teaching they were all older than me. You know I think the third, second class, no third class I had three quarters of them had to be older than I was. They all worked in the

mines and go to school off and on and you know one year, one year we had three guys graduate that had been in school an average of ten years apiece. So they had been at school you know thirty years between the three of 'em. But you know they would take off time and go work for a while and you know they would do other things. Huh.

D: Did you ever curb your curriculum to adjust for mining on the Butte hill?

T: No. It was when I first came the curriculum what people had inherited from the Anaconda Company. Anaconda Co. had a lot of procedures for mine surveying, surveying procedures, procedures for sampling, procedures for you know all this stuff, and uh, for a long time the school had apparently sort of evolved into a subset of the Anaconda Co. And a lot of the teachers had either worked for the Anaconda Co. or worked with companies associated with them. There was, there was only one guy before me that actually had a PhD, everybody else had a master's degree, so a lot of them had come out of industry and there was an old guy named Oscar, came to Butte and worked over on the East side of Butte, not for Anaconda but another company there for twenty years before he started teaching. You know so they had brought all this good practical underground applications like the way Anaconda did it you know, but that wasn't, by then underground mining was on a decline so it didn't really help the enrollment because they weren't hiring very many people and so, you had to do something to kinda spread out so then we changed the curriculum to become more general, used to be all just underground mining even though there was a pit in Butte, and the school only taught underground mining.

D: So in a way you did?

T: Ya, we got away from it rather than toward it.

D: Did you ever do hands on teaching with mines, the underground mines, or the pit, with your students?

T: Oh, well no. The only thing we ever did was we had underground surveying and we'd go underground and survey, probably as close to hands on as you're gonna get. You know cause the engineers we didn't, you know the engineers aren't mining. And hopefully you know everybody was supposed to get a job during the summer, and go to work mining someplace and you know learn the trade. And in fact you know in the old days they'd put everybody to work mining over in Asarco over in Coeur d'Alene over in Wallace. Ya the northwest division would hire 25-30 people per year, a summer, and they would just put 'em all underground. Up through about the time I came all the students worked, all the students that wanted to, worked underground every weekend, in a deal with the Anaconda Co. and so they would all work Friday nights or Saturday nights underground, which was good because the miners wanted the weekend off anyway so the students worked. You know we never did much, there were a couple of times when the other guy would take them sampling underground. One time, we used to do some stuff down at the pit, but it was mostly time studies, watching the trucks and the shovels to see what their sequence was and how efficient it was and how we could do it better.

D: Is there a Butte student that really sticks out in your mind, over all the years you taught?

T: No, ah there was Billy Williams who graduated then went to work over in Idaho and fell down a raise and ended up in a wheelchair, been in one ever since. Probably only worked six months before he fell down the raise. He worked for Asarco and he still

works for them down in Tucson he's a engineer down in their Tucson office. Um probably you know there were a lot of them. John Cora he was a, up on the hill there is a Cora compressor up there by the used stamp for the mine that caught on fire and there used to be a street called Cora Terrace. Cora, he's an old Butte boy. John had a high school record that was mostly 'C's 'D's and 'F's and I don't know you know he came to Tech and it was like he was born again you know, it was incredible. The longer he went to school the better and better he got you know he'd get all 'A's and he was really funny 'cause he was really unsure of himself. And so he would always ask, he would always come in with all his homework and he say, "How does this look?" And you'd say "just hand it in John, we'll do it then" "no no I need to know ahead of time" So but he, you know, but then he worked on a master's degree, not with me but a guy named Bill Puraso who was a you know expert rock mechanic PhD, Bill was really smart and he drove his students really hard, and he only taught in Butte for three years I think, he's down at the U. of Utah now, and a he's got a horrible amount of self discipline and you know, well Cora was his student and he you know, he worked poor Cora to death, and Cora never did get his masters degree. And Puraso told me one time that of all the students he ever had in the last thirty years Cora was the best one and he should've got that masters degree. But he went to work for, I don't know who he worked for, but he worked for a long time for FMC Co. down in Wyoming, and he's done a lot of things. It's a trona mine so they actually make glass and flux out of it and he worked there at a coal mine and he worked at a gold mine in California and he worked there and then a gold mine in Nevada with a really steep, deep open pit John worked there. Anyhow you know he's kinda vice president of government relations or something. He's done very well you know he was

good, he was really good, but if you ever looked at his high school record you think man this guy is a born loser, but he's an incredible guy.

D: Butte is a great example of boom and bust of mining industry. How do you feel about the absence of mining on the Butte hill today?

T: I don't think it matters much; it does to the economy of the town. You know I don't know if Butte whether Butte is a boom and bust example. It is now, well I guess over the years it was with price of copper going up and down and the labor problems but a, you know it was just one of those things where it has lasted an incredibly long time. Aside from Keanacot, the Binham pit down in Salt Lake City or a couple of big pits down in Arizona, you know Butte has outlived all of them and the pit at Bingham didn't start till like 1907, you know they had a few underground mines but they didn't really start mining till 1907, so they're 95 years old, But Butte is, 1870, 130 years old. You know so it's has lasted and you know over in the east pit there there is still another twenty years worth of mining if the price is right. So you know, it's there and sooner or later the price will go up.

D: Do you want to talk about like, did you foresee the decline just maybe with the energy prices or the metal prices?

T: The metal prices although it was always amazing to see those metal prices go that low. When they closed, when Arco bought Anaconda that had to do with the energy crises. All the oil companies said "we're in the natural resource business so if we can make money mining oil we should be able to make money mining anything. So they went out and bought coalmines and copper mines and gold mines and they sort of screwed up, they weren't accustomed to. When you're drillin' for oil you spend a great deal of money

drilling the hole but you get a big return for very little cost once you hit oil. If and when you hit oil you just pump it out of the ground, you got oil. Mining, you know, even if you get a good deposit you still have to pay a lot per ton to get it out of the ground. They weren't accustomed to acquiring a property and then having to continue to spend money on it. So it was very hard on the oil companies. So when Arco closed it copper was like sixty cents a pound which was really low for it, and I guess you know it was fairly obvious that it was going to go low again sometime even though it got up to a buck twenty, buck thirty, you know it practically doubled in price in a couple years. But there are actually huge copper mines all over the world with very high grade. I was down in New Guinea they got a copper mine down there and the stuff they throw away is the best stuff they mine in Butte, pretty tough to compete with. You know it's kinda inevitable and it's always the case whenever the price of the metals go up than everybody and his brother opens a mine and the price goes down. Kinda like raising wheat or raising pigs, kinda like the same thing you know.

D: Other than the mineral resources why do you think Butte worked as a mining town? Was it just the Anaconda Co. or political reasons why Butte has survived the 130 years that it has?

T: I don't know well there is actually no reason to have a town here. The railroads come through here but now they actually don't. The interstate would have never come through here had it not been for the political maneuvering of the Butte petitions when they built it. It should've gone over through Boulder, through Whitehall and down to Dillon that way. But the local politicians pulled all the strings and got it to come through Butte. Which really, it doesn't contribute a lot to the economy, I guess the motels gas stations, you

know the only reason to have a town here is because of the minerals. And I have always considered Butte to be the slowest dying town in the United States. It just dies and dies and dies but it's just like it's trickling away, it doesn't just up and die it just kind of dribbles. A hundred years from now it'll still be dribbling as far as I know, ha ha ha.
D: Could you just describe for a bit what you feel made the deposit on the hill unique?
T: Well, ah, it was fairly easy to get to, it wasn't real deep. It was real massive it was kind of everywhere. The main veins were incredibly high grade. You could ship rock out of the mine and it was just all copper, copper sulfides. There wasn't any waste material, so the first, it also came online right when there was a big boom and a big demand for copper for electricity and telephones, there was just an incredible upsurge in copper demand. Because mines back in Michigan were very rich and very good, but they were very deep, very high grade so the veins in Butte just kinda you know, fed the whole system. There was a big demand for copper and Butte had these big chunks of copper. So the whole thing fit together right then and that founded a big base for Butte, a big economic base. Big companies made a lot of money and made it Butte, big vein, big demand for copper. Well then after the, then WWI saved Butte again, just when things were getting lean a big demand for copper again, and during the twenties it kept goin, and Butte has, even though they mined the big veins, there were out side of veins, it was still massive enough, there's just copper everywhere. And the deeper you went the more disseminated the veins got they were no longer strong big veins but they were they tended to be dispersed oatmeal type veins, they were just spread all over. And so by the time they got done mining on these big veins they said, "oh look, there's all this kind of massive copper deposit". It's vein controlled but it's still there, and so it's kind of a

unique thing for an ore deposit because in the southwest for instance, in Arizona there is a lot of massive copper deposits. The one at Bingham pit in Utah is a massive copper deposit, but high grade enough to pour in interest in the 1880's, 1890's, 70's. What Butte did with these huge rich veins and man everybody came in all these big companies you know they made tons of money and so they weren't going to pull out after that got gone because there were still fairly massive copper deposits left. It was kind of a combination of the way the ore was deposited and the economics of the times. There is you know some real rich vein copper back in Michigan but their small veins and they're very rich, but that's all there is, when the vein is gone, it's gone. Here when they took out the big veins there was still lots of little dispersed copper veins, lower grade but lots of it, which is why they went to blockading in the Kelly and the pit to feed themselves off, is why it went on.

D: I guess this kind of goes to the beginning of your teaching, but of all your students how many do you think ended up working on the Butte hill?

T: You know not very many; by the time I came Anaconda was cutting back. They would, you know every three years they'd have a strike and every three years they would close three underground mines and so it kind of lead to an excess of engineers and a lot of guys would go to work for Anaconda when they first graduated, maybe in the early days in the '60's and '70's guys would work for Anaconda while they were going to school so the Anaconda would hire them when they graduated but they never stayed, stayed long anyway hardly. A few came back, but almost none of them stayed. But there really weren't any jobs because they were so busy closing mines, they just didn't need them.

D: What made you come to Butte?

T: Oh, I always wanted to teach and it was the first teaching job I could get without a PhD. I came and started teaching and it turns out I need a PhD anyway, so I went down to Idaho and did that.

D: What school was that in Idaho?

T: U of I down in Moscow. So I just came here cause it was a place to work, a place where I could get in, a place where I could get started. I never really wanted to leave collage.

D: To get spring break and summers off?

T: Yeah, it's good.

D: How different do you think your job would've been if you would have taught in another town?

T: The other mining schools are fairly associated with large universities. Columbia in New York and U. of Kentucky and U. of Virginia and U. of Pennsylvania, Minnesota and I went on through the school at the U of Illinois, they were all associated with large universities and so the mining schools, or the mining programs or the metallurgy programs. They didn't really get, cause they were nominally always small and so as these big universities grew larger they just said, "hey we don't want you little guys, you little programs. If you don't have two-hundred students you won't be a degree program." So they threw almost all of them away where here in Butte mining metallurgy, and petroleum they were the main stage of the school so there was no way they were going to get rid of them. The one year the first year I taught I had two students graduate. But they still weren't going to get rid of the program cause that's all they had so there was never this continual threat by the university system to get rid of us, and you know that, the

bonus there to was that if you didn't have a lot of students to teach they wanted you to do a lot of funded research. Well mining companies aren't big on funding research and you couldn't go to the government like the biology program or the nuclear bomb program, you know you couldn't get government funding for mining research, it's very difficult although we did, we probably got 3 or 4 hundred thousand dollars in federal research money. But the big money just wasn't there and so mining schools located in big universities it just killed them because they couldn't bring in any money, they didn't get any students, so the universities just did away with the programs. You know the big universities are great mercenaries, cash up front or forget it. Where at Tech there wasn't a lot of pressure to do research. There was a lot of pressure to have good graduates, teach them good things, have them go out and get good jobs, and to do research if you get a chance, that's kind of they way we did it. So it is actually a lot different than other schools, it was a very pleasant place. Ah, if you wanted to do research you could do it.

D: Why did you decide to stay in Butte?

T: Now or in the beginning?

D: The beginning.

T: I'm just here because of the bookstore. Ah, I don't know, it's kind of like your dad. I grew up in Illinois. Once you come to Montana, with all the natural forestland and all those places to go and things to do and you don't have to worry about treading on somebody else's property, or go into a state park with 300,000 other people. When I moved back to Wisconsin after being here for three years I started to realize wo there's a lot of people back here! And there's no, you know it's all private land and there's no public entertainment so I was excited to go back.

D: If you could change one thing with the way you taught, what would it be?

T: More money, I don't think there's much. I was kinda happy with where it ended. Took me a while. You know the students always seemed to do well that I taught. I never knew whether if that was because of what I taught them, or whether they just would've done well without me anyhow. I think it went well.

D: I think that's all my questions

T: Did we do a half hour, oh yeah, we did!

D: All right well,

T: I hope it's all there