

Tanya Petersen's interview  
with Tom Petersen

Introduction

Me: I'm Tanya Petersen and today's December 2, 1993.  
I'm interviewing Tom Petersen on engineering and  
managing. I'm at my home in Ishpeming, Michigan.

# Tanya Petersen's interview with Tom Petersen

Me: When and where were you born?

Tom: I was born in Ishpeming, Michigan in 1949

Me: What are the names of your parents?

Tom: My father's name is Bernhard + Herbert Petersen and my mother's name is Phyllis Anderson Petersen.

Me: What did your parents do for a living?

Tom: My father was a mining engineer for Cleveland Cliffs and ended up being a manager of the iron ore improvement plant before he retired. My mother pretty much worked as a housewife and a few years she worked as a nurse as an LPN at Bell hospital.

Me: What are the names of your brothers + sisters?

Tom: My older brother is Joel and he's a, works in the forest as a jobber and my younger brother is Gary and he works as a consultant in mining and my sister, Lorraine, is currently working with her husband renovating apartments and renting apartments.

Me: What is your spouse's name?

Tom: My spouse's name is Patricia.

Me: What are the names of your children?

Tom: Well, I got Debbie is my oldest daughter, Jeffrey is my son, and Tanya is my youngest daughter.

Me: How long have you been working in the iron industry?

Tom: Well I've been working in the iron industry since

1967, when I worked as a summer student working my

way through college and I worked at the Empire mine for that summer and the next summer and then the following summers I worked as a student engineer at the research lab and once I got out of college I went to work for Cleveland cliffs. That was in 1971. So I've been working 23 years steadily for Cleveland Cliffs and it's all been in the iron industry. *include quote emphasis student work*

Me: Why do you choose to work in the iron industry?

Tom: Well, I didn't have any desire to move away from Ashpeming, I liked it here and Cleveland Cliffs, when you, I chose metallurgical engineering as my area of work so that pretty much puts me in the mining industry, and the local mining industry or most of it is iron that why I ended up in working in this industry. *include*

Me: Please name those relatives who have worked in the iron industry.

Tom: Well really my dad is the only close relative. That's worked in the mines. I had an uncle, that worked in the mines for some years but that's pretty much it for close relatives.

Me: What are the various mines or buildings you have worked in?

Tom: Well, I started out in the research lab and worked there from '71 til fall of '74 & then in that time I went out to the Tilden Mine when we started the Tilden mine up and I worked at the Tilden ~~mine~~ til 1991 so that's about 17 years I worked at the Tilden and then I went over to the Empire and I worked at the Empire since ~~the~~ October of 1991. *include*

Me: Over the years what kinds of duties have you performed for CCI?

Tom: Well, since I graduated I spent about half of my career working as an engineer working in the concentrator end of the operations first at research. We worked at developing process to upgrade the hematite ores at Tilden, and from there I was promoted in 1984 as an operating engineer in the concentrator and that is pretty much a management position ~~running~~ running the process and the concentrator and about four years after that in about 1988 I was promoted a superintendent in the concentrator and I worked as a concentrator superintendent until 1991 and then I transferred to the Empire Mine as the pellet plant superintendent and worked at that until 1992 and then I took on a job as a *facilitator* on our accelerated total quality process and I worked at that almost

a year and just recently I was promoted assistant general manager ~~superintendent~~ at Empire and that's what I'm doing today.

Me: In as much detail as possible please describe the main duties of your current job.

Tom: Okay, the assistant manager of the mine, really my response is, it's a brand new job that we just made at the mine. We have the general manager that's pretty much in charge of the whole thing. I'm in charge of the ~~mine~~ operations. The pit operation where we have a ~~mine~~ pit superintendent, the concentrating where we have a concentrating superintendent and pellet plant, where we have a pellet plant superintendent. And also I'm in charge of the safety department and with these responsibilities I pretty much use my three department heads to operate these departments trying to coordinate the activities so that we're operating the three departments so we have the best total mine operation and most of my duties is to communicate ~~between~~ between the departments and make sure we are being consistent ~~in~~ in applying all the various policies and making sure we're maintaining our budgets and making sure that the operations run smoothly, making sure we're interpreting the contractual things as consistently as we can between departments and whatever special projects come up I make sure they're getting taken care of. There is really a lot to it, a lot of little things it's kind of hard to describe them all. That's pretty much it.

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Me: Did this job require any special training or a higher education?

Tom: Well, I got an ~~engineering~~ engineering degree which for the first half of my career I worked as an engineer. Once you get into management, the background that you have in your education ~~and~~ as an engineer really helps you to ~~learn~~ learn how to make decisions and how to analyze problems and come up with the right solutions. For my current job just several years of lower management positions it's called mid-management positions ~~helped~~ helped me to understand how to manage people and to make the decisions necessary for the level of job I'm in now. So really most of the training has been on the job training in different levels of responsibility.

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Me: Please describe any special machinery or equipment you use on the job.

Tom: Well, I do utilize computers quite a bit now, just pretty much for information management, other than that it's a telephone and a pencil and I do a lot of talking.

Me: What is the most challenging or difficult part of your job?

Tom: Right now since I ~~just~~ got a new job it's always difficult to transition into new responsibilities especially now when I've got a job that's a newly created job and ~~the~~ the most challenging part is trying to sort what the responsibilities of this job is going to be and try to ~~to~~ to that so that I don't interfere with the operations of the departments but I help them out and challenge them to do better and don't overload them with too many things but yet give them enough motivation to keep progressing.

Me: Thinking back over the years challenging duty you had to perform?

Tom: Well, I've been through three plant startups we started up the Tilden ~~concentrator~~ along with the rest of the mine in 1974 and then we expanded it and ~~we~~ started up the second half of it. Actually it was kind of a spread out startup because at in the late seventies or the eighties they were cutting back on the amount of pellets needed so it was kind of a spread out startup we didn't start all the lines at once like we did in the first phase and the third startup was when we transformed the process at the Tilden mine to treating the ~~the~~ non-magnetic hematite over to the ~~the~~ magnetic circuit. Plant startups are always difficult because you got new equipment new processes and there's always things that go wrong you always got to be there, put a lot of hours in and make sure things go right and reacting to the problems when they come up and those are long days. I think in this last startup we were working 120 hours a week, go home for about 6 hours and come back and do that for weeks on end, it's pretty hard on the body, and on the minds and also on the families, so those are the hardest things ~~the~~ those startups, now probably the other most difficult thing is, especially,

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since the last ten or twelve years the over supply of iron pellets, iron ore pellets, in the market and trying to be competitive, so that we can keep our mines running, and that's been very difficult, especially at Tilden. Lots of pressures having to reduce costs, and reducing costs means reducing the amount of people working, and that's always traumatic to the people that losing their jobs and also the people there that have to go through that decrease, those are difficult things.

possible future

Me: Over the years what have you enjoyed the most about your job?

Tom: I think the most enjoyable thing that I've experienced as an engineer is to work on new processes and cost savings and process improvements, and implementing them and watching them go & watching the things get better. Lately it's been managing people is to try to get the right people in the right jobs finding out what their talents are and their strong points and get those people in the jobs that can utilize their strengths & watching them perform, there's been times where I've taken some very low performing people that are kind of misplaced in the work they're doing and get them into jobs that can suit their talents and watch them progress into very, very productive people. I think those are the most satisfying things that my job gives me now.

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Me: What are the big responsibilities of your job?

Tom: The biggest responsibility right now is trying to get the Empire mine to produce high quality pellets but at a much lower cost. The steel partners that own Empire are struggling their competitors with the recycling of scrap, the steel and what they call mini mills, they can produce steel much cheaper than the blast furnaces can use pellets, we've got to get our pellet cost down so that the steel companies that own the mine can make some money on their steel that's the biggest responsibility is to make the same good quality pellets at a much lower cost.

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cost quote

Me: Have you ever been in any dangerous situations?

Tom: Oh, not really, I think most of the work as an engineer even in the plant, of course, whenever there is moving equipment you've got to be respecting of it, but, really I wouldn't call it as any dangerous situations I've been in.

Me: Have you ever been involved in or have you witnessed any accidents?

Tom: I've been involved in investigations of accidents and that's kind of after the fact. ~~Other~~ other than a few minor incidents. One time the pipeline broke loose in the high pressure slurry hosed me down & knocked me down & ended up hurting my shoulder, other than that I, no, I haven't ever witnessed or been involved in anything serious.

Me: Can you describe any unique or perhaps numerous situations you have seen over the years?

Tom: Oh boy! I can't think of anything off hand that, maybe I'll think of something as we talk here. I'll talk about it.

Me: Please describe your working conditions.

Tom: Well, my office is a little cold. Working conditions typically I've worked out of an office, but it's usually been at a mine, so the working conditions in the concentrator or pellet plant that I've worked in typically have been pretty good. It's been a high priority to improve that with all of our efforts at doing that. I would say the plants are very noisy, we wear earplugs. for hearing protection, so we don't end up with any hearing loss. Areas where it is dusty which there isn't any too many places where it is routinely dusty where you got to wear a respirator but there are times where you got to wear a respirator maybe when the dust levels are up.

Me: How have safety standards changed and what improvements do you see are yet to be made?

Tom: Actually, safety standards have come a long, long way,  
the attitude of the employees out there working. 20-25  
years ago it was get the job done, safety rules were not  
obeyed that much. I don't think the rules have changed  
too much I think it's just that management makes a  
bigger effort to educating & to enforcing rules and I  
think employees themselves, have gotten more safety  
cautious and have made an effort to work safely.  
a big driver as far as changing the safety standards  
has been the government. They have their  
organisation which is the mine safety & health organization  
They have rules, they come in and inspect the mines & when  
they do that, we not necessarily change the standards, but  
they're always looking at what a real sharp eye at what  
improvements we could make in areas of the plant. Usually  
they're either guarding something, maybe putting up handrails,  
or watching people's work habits and making sure they're  
doing them right. If they're not doing them right, we get fined  
so that motivates us to enforce our standards better and make  
our plant safe.

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Me: How have you seen the duties of your job change over the years?

Tom: Well I've changed jobs about every, once I got into management,  
about 2-4 years I've had a new job so my duties have  
changed pretty continuously over the years from being pretty  
much a staff engineer working on technical things to now  
working with management, working with people and processes.

Me: Please describe what your co-workers are like. Do you remember any special stories that stand out about them?

Tom: Well, boy there's a real contrast in co-workers, you talk about all the people I've worked with from people in bargaining unit that have been involved in operating or maintaining the plants through to the technical people & the clerks and accountants they are quite a varied contrast of people. Any special stories? Probably got a thousand stories if I could remember them all but, I can't think of anything in particular right now.



Me: During your career were involved in any special projects or have you implemented any new programs?

Tom: A lot of projects developing the Tilden Mine was probably the biggest project, I got in on the tail end of developing the process and then got involved in construction and the start up + the operating of the mine. That was quite an event and also converting it over so that it's really 2 processing plants in one, work and process non-magnetic ores with the original flow sheet & the converting it over to the magnetic flow sheet so that was a major achievement for the mine, and it was directly involved in figuring out how we not only could run the 2 processes but switch them back and forth during the year and that was a major accomplishment, I think for the process people to do that. Some of the other special projects, the computerization of the plants and computer control. Those things I've been involved in over the years, and that was fun trying to take the manually operated equipment and put in all the electronics and all the schemes & programming to make them run automated. That was some of the more fun work.

Me: Have you ever won any awards or have you ever been recognized in any way for your job performance?

Tom: Well, most of the ways I've been recognized is by getting promotions, there is a lot of engineers in the company and ~~not~~ very few management positions so being selected for management and some of the higher level jobs is really probably the biggest reward I have received and in the last ten years, every 2 to 4 years I've received some kind of a promotion. That's pretty much what my efforts have been rewarded with.

Me: At anytimes have you felt like changing your job or your career.

Tom: Well, I think everybody in their career looks, maybe the grass looks greener on the other side of the fence. You contemplate and maybe taking on a different job, but I never did that, I stayed with Cleveland Cliffs, but

Page 9 In 1991, I spent 20 years in the concentrating and bit

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the pellet plant was always down stream of us in the concentrator, we spent all of our time grinding up the ores & separating the iron minerals from the waste rock, & then filtering it and sending it to the pellet plant and we never crossed that boundary line the pelletizing, but in 1991 the manager of Tilden at the time, we were talking in his office and he told me there's an opening at the Empire for a pellet plant superintendant and he was asking me who I thought would be a good candidate for that job and without thinking too much, I told him I would be. I kind of shook him up & he said are you sure? and I said yeah, I think I need a change, so after spending 20 years at the concentrating end of it, I kind of took a big leap there and changed mines & changed jobs by going into the pellet plant & became the pellet plant superintendant at Empire that was quite challenging but I only got to spend a year there & ended up going into physilators job on our total quality effort & then from there to, never did get back to the pellet plant which I really wish I could've because I had some things going there that I started, I wanted to complete, but the manager wanted me to be his assistant & take that promotion so, I guess it's good for my career to move on, but I wish I could've spent a little more time in the pellet plant to learn that a little better. Currently, in my job now, I also got pit responsibility so I'm really changing jobs now, it gives me an opportunity to get a feel for how a pit operates, which is kind of exciting, always learning something new, I haven't changed careers, but within the company I've changed jobs quite often, especially in the last ten years.

Me: What do you think the future holds for the Tilden & the Empire?  
Tom: Both mines have a lot of potential. The Empire always has been the better of the two mines. It's got a simpler much better ore body to work with than the Tilden does. The Tilden has got the hematite process & the magnetite

pit which we can run with the magnetite & also the Tilden's got Canadian partners who've really struggled in the last several years, but I think both mines have a lot of potential. The Tilden has got a large ore body, it's a pretty rich ore body, if they can get their processing costs down, they certainly will be a leader in the industry. The Empire has probably a real bright future, I think to compete ~~we~~ we've got to get our costs down, but we're doing that. I think both of these mines will be around for a long time. I hope the Tilden can get back up to 6 million tons or plus a year, that would be good for this area, to keep both of these mines running open.

Me: What does the future hold for the steel industry in general?

Tom: Well, I think it looks fairly decent. The pellet industry here is got ~~a~~ new competition. It's always been before that we were competing with Steel Made + other countries, imports coming in. Now the competition is really the electric furnaces, where they take scrap iron + remelt it rather than taking the iron ore pellets + having to convert that into steel, that's a much more costly process. But, I think iron + steel are going to be around for a long time. I think there maybe a few more iron ore mines that have to shut down + then we'll be in ~~the~~ balance so that we'll have the right amount of iron ore for the size of steel industry we're going to have. There is a lot going on with changing what we do + how we deliver our iron to our steel industry. Going from pellets to pre-reduced iron + or iron castles is going to be another market for the iron ore producers + that will provide a feed to the electric furnace, you won't have to go through a blast furnace you can go directly from the mines to the electric furnaces.

Me: What do you feel must be done in the future for CCI to remain competitive?

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Tom: Other than keeping the costs down, I think to keep forging ahead & getting iron units fed to these electric furnaces, that's going to be important. Really we need to get the iron out of the ground into the steel industry is what we need to do. If electric furnaces got a big part of that then we should figure out how to get the iron in a form that the electric furnaces can use. That's going on right now, & the Republic mine is a strong candidate for some of that, & if we can get the Republic to do some of that, so if we can get the Republic operating & back up that's going to be more jobs here & more secure future for CCI.

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Me: What do you think has been the key to success of CCI where other companies have failed?

Tom: I think CCI here, most of the success is because of the people, that work at the properties, & at the research labs, & support facilities. I think we've got a real dedicated work force, they work hard, they put in the hours it takes & the time it takes to get their job done. I think the people themselves are the key to success.

Me: Looking far into the future, how do you think history will remember the CCI & its workers?

Tom: Well, I think they're going to look back, hopefully CCI is going to be around for a long time, maybe another hundred years, it's already been around for more than that, (I think they're going to look back & find that it was a good company, it was a good neighbor to the community around here, it supplied good jobs, good paying jobs, to the people in this area) I think they're going to be, looked back at us taken good care of their workers & of the people in this area.

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Me: How has the role of women changed in the industry, & what direction do you think it will take in the future?

Tom: Well, up here the role of women, it's been very slow to get women into the iron industry. We have not

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hired many people in the last fifteen years, & that's the period of time that the women have been getting more opportunities in the work place throughout the country. Back in the early eighties the women that we had hired, in the seventies were the junior employees so when we had cut backs they got laid off. Lately now, in the little bit of hiring we've done we've hired quite a few women to work in the mines, one of the problems there is that there are still a lot of strenuous jobs in the mines, some of the jobs, women just aren't strong enough to do them day after day after day so they usually find jobs that aren't as strenuous, but I do think as technologies improve in the way we do our work, we're taking as much of the heavy work out of people's jobs, it's not real easy in the mining industry because the equipment is very, very large, the parts are big, so it's a lot of moving & manipulating of heavy stuff, but we're getting more & more equipment that does it for us, rather than having the strong backs do it. I think in the future there will be more opportunities of women. Working in the bargaining unit, the technical unit ranks it's the same thing we just haven't hired, it's only been in the last fifteen years where there's been a significant amount of women in the more technical jobs, or technical roles coming out of college. We just haven't had the opportunities to hire very many people, so we haven't really, we don't have that many women in the technical fields yet, but that will change as time goes on, I think we're going to we're going to have to replace some of our technical people when they retire. there will be more opportunities for women.

Me: What skills do the young people of today need to develop if they plan to work for CCI someday?

Tom: Well, <sup>quote</sup> I think they need to develop problem solving skills. They also need to develop an understanding more of an understanding in computers, the sciences, it's no longer that somebody can come into the work place with just a strong back, be able to get by. Even the trucks, everything out there now is getting more & more computerized. Even the maintenance forces now, rather than having a foreman coming & telling them what they have to do today, the maintenance workers are going to have to go to a computer & the computer is going to give them their work, cause the foreman are working in the computer to distribute their work to their people, we need to have people today, that have more education, more skills coming out of schools, so that's something Cleveland Cliffs is working with the schools and I think a lot of industry is working with the schools to get that, so that's probably the biggest areas, then people need to develop if they are going to be successful.

Me: What advice could you give in general to the people of today?

Tom: The real good jobs out there are not as plentiful now, as they were before. I think the competition among students to get a good job is greater. 25 years ago, they used to say go to college & get a degree & you can get a good job.

<sup>quote</sup> Now it's go to college, because if you don't go to college you won't have much of a chance. It's only the real top-notch students coming out of college that get a shot at the good jobs, so it's not just what you're doing, but how good you're doing it. A lot of competition out there, so if a student is going to get a good start on it, I think he's got to really work hard. I think the early in life they learn that the way to success is hard work, the better they're going to be, because there are no short circuits to be successful, there aren't too many people who win lotteries or that, it's all dedicated hard work that gets you ahead.

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Me: Please describe what you enjoy doing in your spare time.

Tom: Well, I have a lot of things I like to do in my spare time. Mostly now it's hunting & fishing. I like to go boating, I like to camp, I like to canoe, I like to hike, I like photography & taking outdoor pictures. I like sitting on my hottub outside on my gazebo. I like the mountains out in Colorado, I got out there about every 2 or 3 years elk hunting & climbing mountains & taking pictures out there. I'm kind of an outdoorsy type person in my spare time.

Me: If you had to do it all over again would make the same career choice?

Tom: I think so, I tend not to look back & question what I've done because there is no sense in it because it's done and over with & I made the decision at the time & doing it all over again I would probably make the same decision. I don't dwell too much on those kind of things, I generally, my thoughts are generally on looking ahead, to where I'm going rather than where I've been.

Me: Before we end the interview, is there anything else that comes to mind that you are willing to add?

Tom: Oh, I don't think so. I think we pretty much covered it with all the good questions you've come up with.

Me: Okay, Thank You.

Tom: Um huh

Excellent info!  
This can be a  
terrific story!

Safety - yellow

Special projects - orange

Managing - blue

future - purple

engineering - blue

duties - green

difficult & enjoyable parts of jobs - pink

advice for people - brown

order

light blue

blue

green

orange

pink

yellow

purple

brown

Due

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