

# “I think you can only be good at it if you are excited about the projects you work on....”

– An interview with Petra Buziak



*Petra Buziak has been a very successful geophysicist at PanCanadian, and then EnCana. The many people within the Calgary and Houston oil industry who have worked with Petra admire her for her technical skills, enthusiasm, intensity, and go-get-it attitude. Along with her professional attributes, Petra is a really fun and genuine person, and a pleasure to work and spend time with. RECORDER editors Satinder Chopra and Oliver Kuhn met with Petra in June 2006, and conducted the following interview.*

*(Photos courtesy: Judy Mahaffy)*

**S:** *Petra let's begin by asking you about your educational background and your work experience?*

**P:** I was raised in Marsden Saskatchewan, and I took my Grade I to Grade XII there. When I was 18, I moved to Edmonton and went to NAIT in the Petroleum Resources Technology program. I picked that program because a lot of guys at that time were working in the oil patch and on the rigs in the local area. I may also have been influenced earlier on in a positive way by an ex-geologist who decided to become a teacher (his wife didn't like him gallivanting all over – he was a hard rock geologist). He taught in my hometown. I think I was in Grade X. He had lots of rocks in his basement and he talked about geology and I thought it was pretty interesting.

So, yes, that was how I first got into oil patch schooling. I knew I was in the right place when the very first – this really happened – the very first day of school, the very first course, the very first text book (it was called Petroleum Geology, the course and the text book) I opened up, first page, first paragraph, first line said, “Petroleum from the word Petra meaning rock, and oleum meaning oil,” and I thought – I am in the right place!

**S:** *This is the book by Levenson?*

**P:** Yes, I think so. My first exposure to the oil patch was in Calgary when I got a summer job in '81. That was between my first and second year at NAIT. I had a really good time. It was the last hurrah for the boom so all sorts of crazy things were happening, like I spent the whole week going to Stampede parties and getting paid for it! Then I went out to the field that summer after the city stint. I went up to a job logging coal core at an exploration camp. It was a really fun summer job, but it didn't last. The permanent job offer that they gave me when I graduated in '82 was rescinded by that spring because the industry had busted and that whole department was gone.

So, I decided, now that I didn't have a job when I graduated, to go and work on a Highway construction crew, five bucks an hour, sixteen hours a day, six days a week. I saved up my money and went to Holland, which is where my parents are from, and I had a good time there. I kept \$400.00 in a bank account for when I got back, and spent all the rest of the money that I had made that summer. When I got back I didn't have a job, but I had put some applications out before I left, and ended up working for the Groundwater Rights Branch at Alberta Environment. That was a very good job and I was very fortunate to get that position.

Let's see, I was a couple of years at the Alberta Government and then I moved to Saskatoon in '84 and there was no work in my field there. I got a job at an electronics company on an assembly line and it was very, very boring. So I decided to go back to school to save my sanity. I went to the University of Saskatchewan and I took the Geophysics Engineering Program. I picked geophysics rather than geology because one of my favorite subjects at NAIT was geophysics. Here is a good story that epitomizes the difference between Technology School and University. At NAIT we had used the green paper back Telford Geophysics book. Four years later, here I am in the University taking a geophysics class and here comes this Telford textbook again. So I am like, “Ah, I got it made,” because I thought I had already done that. But it was the exact opposite. Every chapter that was covered at NAIT was what they skipped at University, and vice versa. It was almost black and white, exactly the opposite was covered, practical versus theory, but from the same textbook.

**O:** *But you have it covered now?*

**P:** Yeah, I got both sides of the story now! So, when I graduated from University I got a job in Calgary at PanCanadian. I was really fortunate that I got some good advice from some of the people that I worked with in '81 in the coal mining summer job. I asked which job offer I should choose, as there were a few. Some of those companies only

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lasted a few years after I started. As it was, with their helpful advice I chose PanCanadian, which has been an excellent company to work for and been around for the long haul. It wasn't really a flamboyant company at the time (there were much more flamboyant companies out there to choose from that gave me offers), but I went with PanCanadian. A little more stoic to begin with, but it ended up being a very high roller, an exciting company to work for in the end.

**O:** *What year did you start at PanCanadian?*

**P:** 1988. I've worked at PanCanadian, and EnCana now, since then. So that is my background.

**S:** *I was going to ask you about your eye problem that you mentioned. It must have been a real shock, especially when you were doing so well at EnCana?*

**P:** Yes, it definitely was. It was something that started really subtly. And then it just kept getting worse and worse. The front line doctors didn't catch it, you know, your average mall optometrist, he said there was nothing wrong. Eventually my family doctor said, "I think there is something wrong," and she got me to the Ophthalmologist on call and even they couldn't figure it out. Finally it landed on the specialist's desk, who operated the next day when he saw the results from some tests. By then it was too late and my vision was permanently impaired. So I basically had to go off work. I actually pulled myself off work about a week before I got the call from the specialist who said, "Come in right now, we have to operate," because by that time I was a mess—I couldn't see anything because I'm left eye dominant and it was my left eye, etc., etc. And so I have been off work since then, January of 2004.

It was a big shock. I was lucky that I had just completed a big project and I was at this really perfect stage to end. It wasn't a case of having to quit half way through doing some great mapping or whatever. So I made myself get through that before I pulled myself off work, and it all worked out good in that respect. I just took it as God's way of telling me that it was time I did something else. So I haven't worked as a geophysicist since then.

**O:** *Because we are in an industry where people experience a lot of eyestrain, maybe you can just briefly go over the symptoms of a detached retina, the early warning signs?*

**P:** The beginning of it was super subtle. And the thing is if it would have been caught earlier there may have been no permanent damage. Basically it doesn't start in the center of your eye, it's on the edge of your eye. It's like when you wear glasses or even sunglasses, and you have a smudge in the corner and you just want to clean that smudge – that is what

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it felt like. So I could still see fine everywhere else but then it started to get worse. Everything got all blurry out of that eye and then things were wiggly, all straight lines had wiggles in them, which is really hard if you are looking at wiggles all day! Blurry, wavy, tilted, flashing lights. The flashing lights happened earlier on with the detached retina, just like a strobe light was going on all the time and I still have that and I always will. But that first thing with the small smudge sensation is what to watch for

**O:** *And then what is the definitive test that the specialist used? How did they finally diagnose it?*

**P:** Well, you see the ophthalmologist that first saw it, he was just the on call one that my doctor sent me to, and he did what they do for glaucoma and things like that (he mostly dealt with geriatric patients), and even he said, "Well, I don't think there is really anything wrong." And then they sent me to the Foothills and they put fluorescent dye in my blood, and then they took a picture of my eyeball. Even then it was three weeks before it landed on the specialist's desk - there are only two of these specialists in all of Southern Alberta. He had all this high-end equipment and an expert understanding of what I said I was seeing, and he understood what these tests were showing. Some of them are just like interpreting seismic. But bottom line was it took a specialist to read that information and interpret my descriptions to know that there was something wrong. And of course my family doctor, who is fantastic in all areas, had to take my verbal description and know that I needed to be seen by an ophthalmologist and that it wasn't "nothing".

**O:** *So is it still a fairly subtle kind of a symptom?*

**P:** No, my left eye still has all the advanced symptoms, so the vision in that eye is permanently and quite severely impaired, but my brain has compensated by changing me to a right eye dominant person, so in day to day activities I get on very well. I can't do eye intensive things for any length of time as I get very sore eyes if I do. Only the onset of the problem was subtle, but that is when you want to catch it.

**S:** *When you and your husband were both working it must have been difficult to look after your family. Did you have help at home?*

**P:** Yes we did, for all the years I worked after we had children. Sabrina, our oldest, was born in '97 and Eric was born in '99. Dean and I were both working full-time and we were very, very fortunate to find a really awesome live-out Nanny. We went to the company and asked, "Can we work compressed hours four days a week?" So I would work Monday to

Thursday, Dean would work Tuesday to Friday. So we only had to have her come in three days a week and she was just great. She was unselfish, devoted, and I always told everybody that the reason that I can do my job so well was because I knew she was at home doing her job so well. When I got a bonus from work, she got a bonus. My kids loved her and she loved them. And really, I never felt very much of the guilt thing because Trisha was the kind of person... it was like a third great parent. She offered things that neither Dean nor I offered and this is like having three parents. So it worked out really well.

**S:** *So how do you find staying at home now after leading an active life in the oil patch?*

**P:** Well, at first you know, it was all new and I was kept busy learning all the new ins and outs and keeping up with everything. For instance, I didn't realize that you have to stay up on the laundry so diligently otherwise you know, the kids are like, "Mom, I have no socks," right? But I did find it hard at first to get a level of satisfaction from staying at home. Like at work you know you can say to yourself at the end of the week -ah, I have figured out some interpretation problem, or come up with some maps or locations, and there is some kind of concrete thing that, you know, you don't need anybody patting you on the back, but you achieve a certain level of satisfaction for yourself that you've done a good job or have gotten something done. And it is hard to get that from home life. You don't see the results of whether you are raising your kids well until they are adults! And it's hard to get satisfaction out of getting your fourth load of laundry done that week or whatever! So at first that was the hardest part.

But lately, especially the last year, I really learned to enjoy my family and home life. Dean and I, well, we can just take pride in those moments when things are going good and Sabrina and Eric are doing something that just makes you think, "Hey, those kids are nice, happy people," and you know you are doing a good job. And so that's about it.

**O:** *They are nine and eleven, is that right?*

**P:** Seven and nine.

**O:** *So they are both in school?*

**P:** Yes, this last year Eric was in Grade 1. The first year I was home he was in Kindergarten and he was only gone for 3 hours, so I felt more that I was doing the job of being Mom with him, as well as running the household. This year they are off at school so I have kept myself busy with projects like reno jobs at home and volunteering at school and church and kids sports stuff to keep myself feeling useful.

**O:** *But I understand now you are looking at going back to EnCana in the fall, is that right?*

**P:** Yes, in the late fall.

**S:** *When PanCanadian became EnCana, what differences did you perceive?*

**P:** You know I didn't see much of a change because at the beginning I carried on working on the same projects with the same

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people and the same middle management and even upper executive management, and the only thing that changed was the headman, the president. For quite some time, everything just kind of went on as status quo, but then eventually EnCana's upper management had a different focus and started to sell off most of the offshore high risk reward projects that I was working on, and used the money for their North American gas projects. So that affected me. But all in all, EnCana has been a great employer and they have treated me with much respect, both while I was working and recently while I have been going through this eye problem. They've been very good and I really appreciate that.

**S:** *Tell us something about some of the projects that you worked on?*

**P:** Okay, well I thought about a couple. The last project before I stopped working was a high profile and successful oil project in the deep water Gulf of Mexico and it was really cool. It was an almost 10 km deep oil exploration prospect, in about 1 km of water, about 3 km of turbidities, 2 or 3 km of salt bodies and then 2 or 3 more km to get to the target turbidite sands. Just the interaction with geology and everything was fantastic.

**S:** *The target was below the salt?*

**P:** Yes, and you would know how tricky that is to image. The project was called Tahiti, one of the projects I worked on in the Gulf of Mexico. I had several, but Tahiti was a successful one that really got me going the last couple of years.

**O:** *What sort of production came out that?*

**P:** Well, we sold it so we haven't gotten the production from it. I believe it is supposed to be on production in 2007. We just had the reserve estimates from the discovery and several delineation wells and that's what I just finished mapping when I had the eye problem. We had drilled all the evaluation wells and we had done our first past reserve estimates and they were going to do a production test on it to prove up production capability. I don't know the results because you know we are not privy to the information now because we sold it. But preliminary Pmean estimates were reported to the media at 300 to 500 million BOE back then.

**S:** *How much did it cost to drill those wells? Any idea?*

**P:** We drilled several initial wells, and I am not good at details, but I believe we are talking 30 – 40 million dollars for each one of them. And we were in for our full share of it as partners. But the team I worked with in the Gulf of Mexico, they were... it was just one of the most amazing teams I ever got to work with. I had fantastic direct management, like Paul Myers and Marty Hewitt who brought these great projects and deals to our group. The Gulf of Mexico deal was really well done. And then there were fantastic geologists, like Patrick Elliott and Andre Politylo and technologists like Jason D'oust and our land man Denis McGrath. All of us, we just were such a good team together and we had to do a lot of traveling to meet in New Orleans and we had a lot of fun. It worked out really good.

Another project that was very interesting to work on, and was enjoyable and successful, was a clastics play south of Edmonton.

I had a really close relationship with my geologist Patrick Elliott and we ended up presenting that project at a convention and we won the best paper in our category. So that was kind of cool.



**S:** I remember that.

**P:** You know I have always regretted, well I don't think regret, but I always thought I should give more convention papers or do more to give back to the CSEG right? Like you guys do so much and that was my only contribution. I headed up and looked after a special session at one of the conventions, and did that paper. But that's it. You know there always are so many cool things that you work on, but I wonder how many of them end up as papers or articles? I like reading what every body else is doing; especially the RECORDER or Leading Edge, and I never did enough of that. But—

**S:** *Who knows?*

**P:** Ya, right. So that clastics project was called the Glaustacod and it was kind of neat because it was a play that Patrick presented as a new geological idea, in an old play area and I used this old seismic data and milked it for new information. We worked really closely together and then came up with this good prospect.

**O:** *There is some kind of a story about the name, was it a bit of a joke or something? Was it a geology joke, if there is such a thing?*

**P:** Yes, it was because it was between the glauconitic and ostracod sands, and there were people at PanCanadian who were really up on terminology and the mapping of sequences in these sands, and which ones cut which, etc. And Patrick was saying, "Well no, it's not this or that," and he mapped his own sequences and came up with this Glaustracod thing.

**S:** *Okay, tell us about the most exciting moments in your professional life. When you won the Best Paper Award, was it that?*

**P:** Well yes, that was exciting. I also had a really neat award from EnCana working in the Gulf of Mexico that totally surprised me. Marty walks into my office and gave me it and I was just, "Wow!"

But I have to say that my all time – I don't know how to describe it – most exciting moment I guess, happened when I worked on a prospect back near the beginning of my career. I was working on a high risk, high expense, and high potential reward well. It was one of the highest ones of those categories that PanCanadian was drilling at the time. It was in Alberta, deep basin carbonates and I worked on it and presented it with next to no full geologist support; just myself and geological technologist Jeff McLean worked up the play and the presentations. So we presented it, they said yes, and we hit the reef on the original hole, but it was limestone. I was convinced that there was porosity nearby and I convinced management

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to run a VSP. We spent a lot of money for the time to drill the well, and at that time a VSP was very expensive, leading edge technology, and this was one of the first ones that PanCanadian had ever done.

We used the VSP to map a fault right next to the well, we convinced management once again to spend more money to whip stock the well

across the fault, and found one of the thickest, most beautiful sections of dolomite carbonate reef ever found at the time in the deep basin. It was absolutely just meters and meters of this fantastic porosity. It totally got me so hooked on the whole high risk/reward play thing. The excitement, the anguish, the long work-up to drill, and then the tight timeline and decision-making that you do while you're drilling. And it was like that with the Gulf of Mexico, the same thing; it was like intense high-energy stuff. But that carbonate well was the first one and it really got to me, and was a real career highlight.

**O:** *Were there hydrocarbons in it? You kind of left that part out.*

**P:** I am going to answer that a little later... maybe (grin).

**O:** Oh, the classic technical success (grin).

**S:** *What has been your strategy as a seismic interpreter towards any of these prospects that you were just talking about?*

**O:** *Working closely with the geologist?*

**P:** Yes, in fact that's what I wanted to say! This is totally the follow-up to the carbonate play story.

Okay, I learned something from that carbonate well that stuck with me all these years. As you guessed, unfortunately there were no hydrocarbons, and that got me convinced of something. Having the geologists on the other side of the floor or on a different floor than you is not good, and that's the way it was a lot of the time back then. You need the whole picture; you need hydrocarbon source, migration, trap timing and regional geology, all related to that prospect. And you don't get that if you work alone and just map horizons on 3D seismic. That was just not good enough for that type of play, right? And so I always insisted after that one on having a close working relationship with a strong geologist on all my projects. A couple of times I even threatened to quit a project because they wouldn't give me, or didn't have, a good geologist.

Right now geologists and geophysicists work closely together all the time, but there are a lot of people that say you can be an explorationist and do the job of both yourself. A geophysicist can be a geologist too – you know, you learn a lot of geology over the years. And of course geologists can interpret seismic too. But I think that there is so much knowledge and work that has to be done to do a proper job on a high risk/reward type exploration play, and I for one just don't have the ego to do it all. Jack-of-all-trades but expert at none, right? You can just miss things working in isolation, and there is also that whole thing of two heads being better than one. I enjoy working with other people, and I don't like working in isolation. I like thinking of some idea, and then just going next door to talk

with my geologist about it. Then usually they give you something else to think about, so you go back and integrate that, and you think of something else, and so on.

**O:** *You mentioned Patrick Elliot a few times. I know him pretty well, and he always says you are the best geophysicist he's worked with. Maybe I should say one of the best, since he's working with Pat Rogers now, and I'm a friend with Pat, too! But you started with Pat Rogers, right? At the time you were the first two in PanCanadian's training group.*

**P:** Back at ya, Patrick! Yes, I think Pat Rogers started the year after me, or maybe it was the same year. We both went our separate ways after our training stint. Most of the time we weren't working on the same projects. But I remember I would always go, even if we were on a different floor, and ask Pat, "What are you working on?" and he would do the same with me. Just showing each other something new we were working on, because you kind of get stuck at looking at the same 3D or the same 2D or whatever and it was good to see new ideas from others. Pat was always doing great work and so good to swap info with.

**S:** *For some interpreters it could be a little challenging, going from Alberta to the Gulf of Mexico, and I was going to ask you, how did you find that switch?*

**P:** Well, over the years I had come to know the geology and geophysics and the Canadian Sedimentary Basin reasonably well, and not that you are not always learning something new, but it was getting easier for me. I also knew the people and the companies and the industry, and knew who was good to work with and whom I could trust and who trusted me. You get comfortable with that whole thing. But things were way different in the Gulf of Mexico. Quite a bit different.

We were basically the underdogs on the projects, because they were always worked on jointly with some Houston or New Orleans oil company, and these partners kind of had the thought that they were the experts. They were right next-door to the Gulf of Mexico and we were just the northern know-nothings. The fact was that I myself didn't know anything about turbidites when I got in to the area, or deep salt basins, or anything like that. I did have a learning year when I worked on a project that turned out wasn't going anywhere. It was a really good opportunity to learn all about the geology, the seismic acquisition, processing and interpretation of deep-water prospects, including PSDM and PSTM, which I had never done before. So when I got into my first meeting with a Houston processing company, I thought I better keep a low profile and not say too much and just listen up, which is unusual for me. So I didn't say much but I had questions about what the processing company was showing us. So when I came back to Calgary I got some processing tests done... did I get anything done by you Satinder?

**S:** No.

**P:** No? Okay. Well anyway, I questioned several processing colleagues in the industry here and in our company, about what I was seeing; I showed them some of the test results of the processing and whether what was being done was right, or enough. And then I went back to Houston and told them

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what I thought they were doing wrong and suggested what they could do differently... and that did not go over very well.

S: It never does.

P: No, but you know I was so used to working with everybody here where you sit down at the table with your processor and you work together and you try and solve the problem. There I was told this is the way it is and then you know, I – well, it was a different way of doing things. But what was interesting, it took some time, but eventually all the partners saw that the very expensive million dollars of processing was not up to snuff and none of them had called them on it except for us, me, and they had to redo a bunch of it. With some of our suggestions included.

O: *So when you say not up to snuff, what sorts of things were lacking?*

P: Well, they had not done a proper job of multiple attenuation and the velocity model (which is very interpretive I know, there is no right and wrong), and even the migration algorithm was implemented somewhat incorrectly. There were people here in Calgary that really helped me out that had worked on offshore deep-water processing on the East Coast, and they knew their stuff. When it came to our logging issues and new logging tools, I often would talk to the guys here in Calgary. In fact I just want to say that all the time I worked the Gulf I was always so proud of the geophysical processing community in Calgary, we can hold our heads high. I had always worked with a lot of really good processing companies and that just proved to me that we could hold our own. And then as for the rest of our group – management, G&G, engineering, drilling department – we held our own so well too in those areas, and got a lot of things done that worked. It was pretty impressive.

We also worked with some really great partners, and processors and geologists and geophysicists from the States – I do not want to slag them. I don't want to end my comments about the Gulf of Mexico without clarifying that.

O: It sounds like it might have been a situation that could happen anywhere, where a company gets very comfortable in its relationship

with certain service companies and stops questioning, and then if a new partner comes in they are more likely to look at things more carefully.

P: Yes, that's a good point.

O: Not a Houston versus Calgary thing, because I would imagine that U.S. firms coming up here have dug into things a little bit and found things going on that they didn't like and have improved the processing or whatever.

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P: Yes, right, that could definitely be what was happening.

O: *Just going back to the training group, you know I interacted with you guys a lot in those years, there was Bill Goodway and Ann O'Byrne especially. Who were some of the other mentors that you worked with through those years?*

P: I would like to mention what I said previously about working together on projects, and two heads being better than one. That applies to many people besides the geologist. At PanCanadian we had people like Bill Goodway, and Al Goodfellow and Ann O'Byrne who looked after a lot of things on the seismic processing and acquisition side. Actually, not really looking after it, they were the people that you consulted with and who helped you come up with the best plan for your acquisition or your processing; they kept up on the latest things in their field and then they could discuss that with you and allow you to get the job done properly.

So as an interpreter you could carry on, you didn't have to worry yourself with the details of it and that was all very beneficial. And again, you can't be jack-of-all-trades. I think it was really good to have those specialists out there and then we would all come together to make the best decisions and it was the best scenario.

Regarding mentors and people that helped my career, a really important person in my career was Gerry Macey. He headed up exploration in senior executive positions through most of my interpretation career. He recognized good work, accepted the risk/reward of exploration, held a high standard of work from others, and he backed his people. If you proved yourself to him he would back you, and because of him many great high-risk exploration projects that would likely not have proceeded at PanCanadian or EnCana were pursued and realized great rewards for the company. He gave us the opportunity to work on really great projects.

He also provided opportunities for people to change around to different projects in the company. He would not say, you are good at this; you have to stick with it. He was a real continuous learning kind of person – he set that environment for all his G&G staff. He was a real proponent of technology and so I was fortunate to work on all the state of the art stuff at the time, visualization and interpretation hardware and software. It was often a few years later before some of the other companies got that. We were really fortunate.

And other people that helped me in my career were the new young blood. I remember when Lee Hunt started, that was just the best thing ever. He totally would push your continuous learning and make you think about things in new ways.

O: *When did Gerry leave EnCana – was that soon after the takeover?*

P: He was there for a good, well a couple of years after the merger, and then he left. It was almost the same time when I left with my eye problem, coincidentally.

S: *You mentioned you like taking up challenges so I was going to ask you, instead of just saying, "I like it," could you elaborate a little more on that?*

O: This is like a job interview.

P: Well, an example of taking on a challenge came when I decided to apply to go to the Gulf of Mexico. It was after I came back from maternity leave with my second child, and I could have worked in an area that I was experienced in, and it would have been relatively easy and instead, what do I do? I thought oh, let's get into something totally new. It was a lot of work to learn. Everything was new there in the Gulf, and I had my hands full at home with a toddler and a six month old – What was I thinking? – but it was so exciting and worthwhile, and I totally loved it, right? Learning the geology was so neat there and it just made me excited to go to work. I always found that if you are working on the same thing too long you don't have as much excitement for the job.



Another type of challenge is sometimes using some new or some old interpretation technology and you slog away at it, you try different things, you map, and your challenge is to not sort of give up and say – ah, screw it, it's good enough, or whatever. Because sometimes, all of a sudden, just when you are thinking nothing is going to work, bingo, you are seeing the geology in the seismic and you go crazy interpreting and mapping. So that kind of challenge is fun too.

S: *You joined PanCanadian sometime in 1988 you said. At the time I believe interpretation must have been done on paper sections, so then you got those workstations. How was that transition from paper to the new technology at the time?*

P: I didn't have to transition, fortunately. Actually PanCanadian and the industry on the whole were just progressing to workstations when I got into interpretation. I never liked all those rolls of paper, spread out on the floor, I thought what a waste of trees, barely anybody recycled, it was just horrendous, so I jumped on the bandwagon of workstations. I begged to get one as soon as I was an interpreter. Interpreters like Garth Shylonyk who just started a few years before me, he had one and a few other guys, and I said, all right, I want one of those.

Once I had one I was hooked and benefiting from how much more info I could see from the color displays compared to black and white. And you know the scaling and zooming and all that stuff that you can't get with paper. Since then of course all the interpretation software has advanced, and it's just made workstations invaluable, while paper interpretation dropped off altogether. I think because I started near the beginning of the workstation era, I don't know if this is true, but I kept up on all the new visualization and interpretation technology. I ended up being a kind of expert. Whenever something new came in I always wanted to be the one who tried it out. I always signed my name up for being the test person to try it out on a project. So I think that was actually an advantage.

S: *You are a successful seismic interpreter, so what is required to become one?*

P: I think you can only be good at it if you are excited about the projects you work on. Sometimes, when you know you are

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working on something that just isn't going to work out, then you just aren't able to do a good job, and you won't be successful. But it takes a lot of lead-time to work on a play to turn it into something – to turn something that's humdrum into something that is exciting. And yes, sometimes I was excited about a play and it just didn't go anywhere, but I always learned a lot from it, technically. And more times than not, if I got excited about a project, then it did have success. And the other aspect is continuous learning, learning what's new and how you can apply it. How you can use either old or new technology or interpretation or geological ideas, whatever it is, on your projects.

**S:** *That leads me to another question: in seismic interpretation the one easy way out is to simply drill on the structure. Here is a prospect and you have to go ahead and drill (and this is true of companies that don't want to spend so much time or money on more work). But there are others who would like to do a really good job lowering the risk if possible before going ahead with the drill. What new technology did you adopt to lower the risk in your prospects?*

**P:** I don't know. It's hard to answer what new ones because there are just so many. Over the years, whatever was new out there, I tried to use it. Sometimes it applied, sometimes it didn't.

**O:** *AVO, LMR, all that stuff PanCanadian was into at the time, I'd imagine?*

**P:** Absolutely, I would try to apply it and it worked great on some projects. Then I couldn't get it to work on some, try as I might. I remember working on this one project; we always said there's got to be another one, that Nisku Oil Field, Meekwap I think it's called, in Northern Alberta. I just kept thinking, why can't we see that, the porosity from the tight limestone? And we tried everything and then we thought whoa, what more are we going to do with it? So we stopped. We technologied it to death with what there was at the time. I am sure that since then somebody has figured it out.

But you know it's that decision whether you do a lot of work and tech it to death, or do you just map and go? That's so prospect- or play-specific too. Sometimes all you need is a map of some porosity indicators because you are working on a tried and true play. You know there is hydrocarbon in the area, and you just reduce the risk by figuring out what are the best seismic indicators and which things from the seismic you should be mapping. And other projects require the regional geology, the oil generation, migration, plate tectonics, trap timing, everything. And the seismic is used to help reduce those risks as well, it's not just for mapping prospects, it's for all those types of things and so yes, you do what is needed.

**S:** You briefly mentioned PSTM and PSDM work in the Gulf of Mexico...

**P:** Yes, that all had to be done, and then we mapped the structure and tried to find the porosity. I don't know how people could see stuff on time data; boy, you've got to have a real eye for interpreting that! A lot of the work is in getting the PSDM as close as possible to image something, and then I looked at (interpreted) the PSDM for a long time.

**O:** *Just going back to Satinder's question about what makes a successful interpreter, say you were in charge of hiring an interpreter, besides enthusiasm and interest in the job, what sort of personality traits or work habits would you look for? There's got to be some people who are not good at it, like maybe they are lacking 3D spatial imagination or something. What makes the ideal interpreter?*

**P:** Haha, that's a good question! I think if anything, you have to be imaginative.

**O:** *In a geometrical sense or in keeping several possibilities alive at the same time?*

**P:** The latter. Yes, I remember working on this one 3D and it was just a Central Alberta clastic thing, and I wanted to map it a certain way and I looked at it, talked to the geologist and we just couldn't see how we could map it that way, even though my interpretation was telling me to. And then I went on this modern clastics depositional course, and I came back with new ideas, and thought it could be that we can map it this way, and that this could make sense. We ended up drilling on the sweet spot and found a new pool, several million barrels, which we might have walked away from. You have to be imaginative in thinking of different ways things could have happened, and then be willing to say something that you might think is stupid out loud to your colleagues. And if you work with somebody who won't scoff at your insanity, then I think that is a trait that is really helpful.

**O:** Wouldn't you say there is almost no such thing as a stupid question? I mean of course there are stupid questions, but a lot of times people are afraid to ask a question because they think it will be perceived as stupid, but then once they ask it everybody else thinks, "Oh yes, that's exactly what I wanted to say." Maybe somewhat similar to you questioning some of the Gulf of Mexico processing products or whatever, and then it turned out that you had some valid points.

**S:** *Petra let me ask you this. You have mentioned that the input from the geologists or other people working on the project is a must for doing a good job. Now we have been hearing about integration, you know, that we need to bring in different people to do our interpretation. But simply bringing in people, geophysicists, geologists, and reservoir engineers who are working on that project, simply bring them into one room, is that enough? We have been hearing that it has to be a unified approach, with everyone discussing and contributing. So do you think this implies the need for more of a political approach to a project?*

**P:** I don't know, I really don't. All I know is that whenever I've been only sort of close to my key members, like across on the other side of the floor, it's not close enough. You've got to be literally close, to really get the most out of your teammates and them out of you. And I also know that the people you work with have to be interactive types and you have to get along. I mean the odd time there is somebody that is just not clicking, right?

**S:** *Ego problems?*

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P: Yeah, whatever. There is nothing you can do about that. So I have just been fortunate that mostly I didn't have that. The odd time, maybe if I did, I just worked around it. But you don't get as much out of that potential teammate if you have issues with that person, or they are not interacting. But when things are good, they are very good. But you can't force it, it just happens and I don't really know why it happens.

O: Well you see these little teams – maybe an engineer, a geologist, and maybe a geophysicist – they go from one company to the other. Maybe there is a gap of a year or two, but eventually they get back together again.

P: That totally makes sense to me because when you do hit on something good with a teammate, it can be really good, and you can achieve great things. And when you don't you just want to get the hell out of that project!

O: *I am thinking of your situation now in life – you are still relatively young, your kids are full-time in school, but because of your detached retina you can't do the intense technical work. You probably want to get back in the job stream and have that same feeling of discovery and risk and reward. What are some of the things you are thinking?*

P: Well, I took, years ago, just by coincidence (and everybody wondered why I was doing this), an adult teaching certificate. But I actually broke my neck at the time (Yes, I've had a few weird things happen – that was in '91). I had been working about 3 years and then I was out of commission for about six months. When I got back I couldn't do much physical stuff but I could do my job. We rigged up things with my drafting table and such so I could. But at any rate I decided I'd take some post-secondary schooling after work hours and I took courses in teaching adults. It took me 3 years to do it, evenings and weekends, but I got this certificate. Now all these years later I am thinking I do have that educational background in teaching adults and the expertise in geophysics, and I would probably enjoy teaching.

My problem is going to be, if I get into that, not that I don't have enthusiasm for teaching, I'd love to pass on how much I love geophysics and everything, but I am just a practical kind of teacher and not good at discussing things that I haven't done myself. So if new things come along and all I do is read about them, then try to teach them, I might have difficulty in that. But teaching, I am thinking that might utilize what I do know, without having to strain my eyes.

O: *What about a smaller oil company where you wouldn't actually be doing interpretation but be a part of that technical team?*

P: Right, reviewing prospects? Yeah, I have thought about that too.

O: More on the business side.

P: Exactly, and passively looking at things and deciding whether they fit in with that area. That is interesting to me too.

O: I imagine you would have been exposed to quite a lot of learning experiences on the business side.

P: Oh yes.

S: *Okay let's ask you, have you other interests?*

P: Well I used to donate my time to various organizations, when I first started in the oil patch. And then I had children and was working and found I had less time but more money, so I donated money instead. But the last few years since I have been home, I have been back to more time than money, so, as well as keeping up on the monetary donations, I have also been helping out with my kids' sports teams, school reading programs, church programs, charity fund raising, that kind of stuff. And in the summer we camp a lot, biking, hiking, swimming, everybody in the family likes it, myself included.

O: *Do you go back to Saskatchewan in the summer?*

P: Yes, we do a lot of camping in Saskatchewan. We go to the farm, Dean's folks; my folks are like 80 and they are in a sort of a retirement place in Weyburn. They moved from my hometown after 50 years. They moved there because my younger sister is in Weyburn and she is a dairy farmer there and none of us were around home, you know, so it was just a good place to be 80.

O: *Do you also go camping in Northern Saskatchewan?*

P: We usually go mid- and southern Saskatchewan, like Lake Diefenbaker. Also we go to Marsden because there is a lake there, and then Dean's folks are on the other side of North Battleford, so we go to the farm and camp in the area. Lake Diefenbaker and Cypress Hills, Saskatchewan side, is really nice. What we do is we go there for my family get-togethers; everybody congregates in the summer now because in the winter it is too hard to get my Mom and Dad and 6 daughters and their husbands and their kids and their grandkids all in one place at one time. So our family get-togethers are often in the summer and we camp for 3-4 days and then we toodle around ourselves, then go to the other side of the family, toodle around some more, and then come back. And then weekend trips you know, we do Alberta camping – Forestry Trunk road, Dinosaur Provincial Park, Route 66 Kananaskis etc.

O: *And is Dean also at EnCana?*

P: Yes, he is.

O: *What does he do?*

P: He works in I.T.

O: *Ultra geeky family? [Multiple voices and laughter] Are the kids showing aptitudes towards technical kinds of things?*

P: Actually yes, my daughter is brilliant in math – she is only in Grade III, but from Grade I on it's been 100% on anything mathematical. But her printing and writing is a bit shaky. In her English LA work it's always 3/3 on every part, except



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- neatness 0/3. It's been my bane too, my whole life – I'm just a scribbler, messy, terrible. You know computers are good for that. And she already says, "I want to write it on the computer," because she knows she can't slow down her thinking enough to write neatly. Eric's strongest subject for marks is math as well.
- S: Kids don't spend enough time practising writing or they don't write enough.
- O: Well I've gone that way – I used to be able to write and now if I have to fill out a form or something with a pen it just about kills me. My hand cramps, and my script is going back to Grade III level!
- P: Your hands can do keyboard and mouse but not hold a pen.
- S: *So, one last question. What would be your message for young geophysicists who are just entering our profession?*
- P: I hadn't really thought this one out. Well, I did think about it and then I forgot what I thought about (grin).
- S: Maybe you can jot it down later.
- O: *Or maybe you can think about it in terms of your own career? What are some of the things you wish somebody would have told you or advice you could have used early on?*
- P: Yeah, that's a good way to look at it. With regard to working on projects, I think I said that already – if you are working on something, you have to give it time, you have to put the time in to see that it's a good project and see if the people you are working with are good to work with. You know you can't make first impressions; you have to slog at it for a while.
- But if after you slog at it and you have given it its due time, and you still don't think that that's the team for you or that's the project for you, make a move, because there are so many great things to work on. I have had so many neat projects and sometimes I stalled out, but I never allowed it to get me down. It's the same kind of thing, if you know some people, they just

don't get on with their life. Something happens to them and it's like all they ever do is, you know, lament about that and yet do nothing about it – bitch about their job but never change anything, or whatever.

You know, even when there were lulls, and downturns, and times when G&G people weren't such a hot commodity, I remember thinking, I could get canned for this, for taking a stand on a project or team not being right for me. So that's something I strongly believe in, and would pass on to the younger generation – there are many great things to work on, so it's a shame to waste time and possibly lose interest in your career.

Another thing I would advise is to treat all of your colleagues with respect, including other companies, and service companies, whatever. Learn with them and solve things with them, and just take advantage of everything that they know.

- O: Make sure you get the words "that they know" in there. [Laughter and multiple voices]

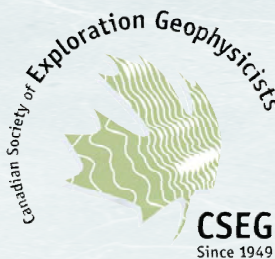
*What about one last comment on continuous learning, because you mentioned that a few times and that struck me as being a bit of a theme in your career, or life philosophy?*

- P: Yes, take what's new. I had a couple of occasions when I was not a new geophysicist, but I was nearly a 4 or 5-year geophysicist and I saw 15-year geophysicists and they would feel threatened. I could see it, threatened by new guys coming along with new ideas, and it was like they were trying to protect something, I don't know what. But in my career I have totally respected the new people and their new ideas, and tried to learn with them. I thought to myself, those senior people had nothing to fear, they should just take all the great new things in stride. But that's not a message for a young geophysicist, that's a message for the older ones.
- S: Okay, well great. Petra, thank you very much for giving us this opportunity to sit and chat.
- P: Thank you Satinder and Oliver. It's been a pleasure. **R**

Have you moved?

Do you know someone  
who has moved?

Let us know



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