

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Gordon Black

INTERVIEWER: David Finch

DATE: January 21st, 2000

DF: Today is January 21st, 2000 and we are with Mr. Gordon Black in his office in his home at 92 Bayview Dr. S. W. in Calgary. My name is David Finch. So nice to be with you Mr. Black.

GB: Thank you David.

DF: Can you tell us where and when you were born?

GB: I was born in Medicine Hat in February, 1917.

DF: So you're a native Albertan.

GB: Native Albertan.

DF: Tell me about your education, where did you go to school?

GB: Medicine Hat Alexandra High School. Graduated from high school and went to Lethbridge, June 15th, 1937. Now your interest is in seismic. To the best of my knowledge the first seismic crew to come to Canada as a complete working crew 6 days a week was a GSI crew under the leadership of Party Chief, Martin Kelsey. Martin had quite a distinguished career with GSI after his stint in southern Alberta. GSI was working for Standard Oil of British Columbia, which is today Chevron. They had a very, very large block of acreage. Rudy Solberg was the representative manager of Chevron or Standard of B.C.'s interest. Did not live with the crew permanently but certainly had weekly to monthly visits on progress. This crew of Texans and Oklahomans hit Medicine Hat in June of '36, just to coincide with the school year ending and of course, the Medicine Hat girls were all ga-ga over the Texas and Oklahoma accents. Several married members of that crew and naturally emigrated to the States. One of the comments of a senior crew member was, 10% of what I'm paid is for the work I do, 90% is for not divulging what work I do, do. So it was a tight lipped group of people.

#038 DF: So how did you come into contact with these people?

GB: My father had a very small explosives business in conjunction with the Black Hardware.

DF: And your fathers name?

GB: Robert C. Black.

DF: So what was the explosive used for by everybody except the seismic people, what did the people in Medicine Hat need explosives for?

GB: There was an operating coal mine, the Ajax Mine, they consumed a little bit of pellet powder and there were a lot of what were termed gopher mines throughout. . .well, almost anyplace there was an outcropping there would be a little gopher mine.

DF: What is a gopher mine?

GB: A one man operation, digging in the side of. . . .

DF: So it would be just the size of the thickness of the seam?

GB: Well, a little greater to let a man's body in.

DF: But he was just digging it out by hand.

GB: Yes, but they used small amounts of explosives. As I said, my father was a very small explosives dealer. But when the seismic crews came the picture changed.

#058 DF: Okay, before they came, you say pellet powder, what is that?

GB: Black powder compressed into a pellet form.

DF: And that was the only kind you were selling at that point?

GB: No, there was Monobel.

DF: And what was that?

GB: It was an explosive allowed to be used underground because it had a fuse safety content low enough to meet mining regulations.

DF: And then you would have had some kind of detonating device you sold as well?

GB: There were #6 caps, safety fuse.

DF: So now tell us about the seismic crews, what did they need that was different?

GB: The seismic crews were using what was known as 60% high velocity gelatin which was a nitroglycerine explosive. Oddly enough the carrying body was corn flakes.

#077 DF: So what do you mean by carrying body?

GB: Well, nitroglycerine is a liquid. You don't think that you can have a liquid in a cardboard wrap so it was mixed with cornflakes and then put in the tube. CIL was the sole supplier, manufacturer of explosives in Canada. CIL in turn, was 60% owned by ICI, Imperial Chemical Industries of the U.K., 30% by Dupont of the U.S. and 20% by the Canadian public. As the sole manufacturer of explosives they determined what was and what was not available. In the case of high velocity gelatin they said yes, we can certainly make it but it is not a standard item in our product line. So we will require firm orders for firm quantities with the result that Standard of B.C. had to order their estimate of their season's requirement. And for the sake of discussion we'll say it was 100,000 pounds. So they bought 100,000 pounds and then my father had a pretty good magazine capacity so he drew it from CIL's James Island plant.

DF: and where is James Island?

GB: Off the coast of British Columbia, close to Sidney, B.C.

#105 DF: How was this transported?

GB: It came in to Medicine Hat in 360 case carloads.

DF: On the train?

GB: Train. Rail transport.

DF: Tell me about these cases.

GB: They were wooden cases.

DF: How much did they hold, was it a specific weight?

GB: Yes. Normally 50 pounds. But because this high velocity gelatin was probably hand loaded the weights of every case varied from 48-52 pounds. So we had to keep tabs of

what weight went on each crew delivery, which was a slow tedious task. Nevertheless my father somehow or other developed a very close personal relationship with Kelsey and many of the others. The shooter on the crew and one thing and another. So they seemed to enjoy doing business with him. The following year, in '37 and '38, they were moving west of Medicine Hat towards Drumheller. The explosives distributor in Drumheller was a man by the name of Harrison. Harrison's business was of course, 99% supplying the coal mines. He had little interest in this new fangled seismograph powder and so my dad cut a deal with him. My father would continue to buy and sell the seismic explosives. Harrison would store it and deliver it for a pre-determined fee and I don't recall what that was but probably in the area of 50 cents a case. But that's just a guess. So anyway that was the basic start of the seismic industry as I recall it in southern Alberta.

- #139 DF: You said your dad had magazines, what kind of storage facility did he have for these explosives, a separate building, a bunker, what?
- GB: Again, a bit of luck came in. He owned a farm on the South Saskatchewan River and land above it and of course, if you've ever been to Medicine Hat, you know the coolies. So he had unlimited land you might say, on which to build. They had the brick and tile plant there, it was a cinch to put up a storage magazine. Regulations were a far cry from what they are today. So anyway he had ample storage facilities. Because I'm only talking 360 car loads. Add into that a backup 500 cases of powder would be all the storage he needed. Harrison of course, was storing much larger quantities of Monobel's and black pellet powder for the coal mines. So he had lots of storage capacity.
- DF: How big were these cases, more or less?
- GB: The seismic cases were about 3 ½" deep, 14" wide, about 30" in length. The mining powders were all in cases
- DF: Were they bigger than the seismic cases?
- GB: No they were a completely different shape. Your mining powders were by and large in 8 ounce sticks. There's a stick there. So if you can visualize packaging 50 pounds of that, then you can get it. There very roughly is the shape of a case of mining powder.
- #179 DF: Okay good. So you were only carrying powder, you didn't have nitroglycerin in liquid form.
- GB: No, certainly didn't.
- DF: What safety considerations had to be taken into account, to be safe with the dynamite or the explosives?
- GB: I guess we learned to spell the word and that's about it.
- DF: It was pretty stable stuff as it was packed.
- GB: Yes. It was very, very rare that there was an accident in the storage or transportation of explosives in Canada.
- DF: Did you ever have one?
- GB: No.
- DF: So far you've said that this was your father's operation. When did you come into it.
- GB: I mentioned earlier that I moved to Lethbridge in 1937. I mentioned very briefly earlier

that my fathers principal business was the Black Hardware. In Lethbridge there was the Hoyt Hardware. The Hoyt Hardware was formed by an amalgamation of Western Canada Agency and Hewitt and Black to form the Hoyt Hardware. B. B. Hoyt had been the principal owner of Western Canada Agency. He in turn or Western Canada Agency was the CIL distributor for southern Alberta and southeastern British Columbia. But also Western Canada Agency was a mine supply outfit with speedy boring machines, miners safety lamps, carbides, picks and shovels. It was quite a major player into the coal mines of the Crows Nest Pass and of course, Lethbridge had 6 or 8 operating mines at that time. So the explosives business of the Hoyt Hardware was a major division. In 1937 we had no insurance and found it difficult to buy insurance, so the Explosives Ltd. was incorporated on June 28th of 1937.

#229 DF: And this was your company?

GB: Yes. The principal reason for it's incorporation was to safeguard Hoyt Hardware in case of an accident. Something that never happened. So anyway there was geophysical activity south of the border, northern Montana all through '37 and '38 and these crews would penetrate the border. Customs would not permit them to bring American explosives with them and they were stymied, what do we do. Well, there is an explosives outfit in Lethbridge. So we I guess you'd say, dabbled, drawing from my fathers stock in Medicine Hat to fill these short bursts into Canada.

DF: And who was this that was doing this work, which seismic company?

GB: Heiland was the one that I recall.

DF: On contract to?

GB: I don't know.

DF: Probably Imperial eh?

GB: No. No way, because they were drifting up from Montana so it would be an American.

DF: Maybe Shell Oil or something like that.

GB: Not Shell. If I were to guess I would say Gulf. But there were many independents. The big move from Explosives Ltd. point of view was the interest of Imperial Oil. Imperial had a exploration subsidiary known as the Northwest Company. Northwest had acreage in the Taber area and they were amenable to placing orders for 100,000 - 200,000 pounds of product and have us store it and deliver it. And of equal importance the seismographic caps were all of American manufacture, either Dupont or Hercules. They too had to be purchased outright by the owner, which would be Imperial or McColl Frontenac or B.A. B.A. later became Gulf, McCall Frontenac became Texaco and they were the major players. The seismic industry really started with the border and moved north and east to Saskatchewan.

#287 DF: So the Explosives Ltd. Company started because of the demand of the seismic industry.

GB: And the mining industry.

DF: And the mining industry.

GB: Yes. We must not forget that the coal mines of Lethbridge and the Crows Nest Pass were

larger consumers of explosives than the seismic industry and still are. We found excellent cooperation between the major players and our company. And as geophysical contracting became more prominent we found crews arriving on our doorstep on a Monday night wanting a load of powder for the next morning and they knew nothing about this advanced purchase. But you can't very well sit on your hands and see an entire crew twiddle their thumbs. So we took to borrowing product that had been bought and paid for by a major customer to an independent American crew coming in, wanting to go to work, having a work permit, having everything valid but product. The most embarrassing moment I think in my career in the seismic supply business was when we had to ration Imperial Oil for 10 seismograph caps at a time when they theoretically owned 10,000. Of course, this was serious. I guess I could have been accused of almost anything but I went to a man by the name of Fisher, who was Imperial's manager of purchasing, J. E. Fisher, I believe. Anyway I explained to him exactly what was happening and he said, I can understand your position completely and I just have one comment, don't let it happen again. Almost simultaneous with this incident, CIL decided to make high velocity gelatin a standard item in their list of products. So advance ordering went out the door.

#350 DF: What year was that?

GB: That would be '41, '42. They were still not making seismographic caps but we decided that we would gamble and bring caps in on a non-presold basis.

DF: Can you explain to me what a seismographic cap is?

GB: A seismic cap is not the same as a detonating cap for any other explosives.

DF: How is it different?

GB: It's different in its exact time and that is, you come down to the basics of seismic work. They must know the exact time from detonation to the reflection of the wave to go into the recording truck. The cap has to have the same speed of detonation every time consistently, no variation.

DF: And was CIL making those or did those have to . . .

GB: No. They were made by DuPont and Hercules.

DF: In the States or in Canada?

GB: Well, for the States and Canada.

DF: Okay, but they were brought in from the States?

GB: Yes. Then I guess the next big move, B. A., Gulf pioneered the Pincher Creek field. I would guess that they had a crew every summer for 5 years. That resulted in the Pincher Creek field originally B.A., later Gulf, that was the largest single gas supplier to Alberta Gas Trunk Trans Canada Pipelines for the line east. Now it's known as a prairie field and so it went into decline almost as fast as it came in. From 9,000 pounds pressure down to minimal. Today it's a mothballed facility. 10 kilometres west, straight as an arrow is the Shell plant, Shell Waterton, which is mountain. Shell Waterton is second only to Shell Caroline. Now time lapse, I think we've done quite a spread here in years. I don't know what else you want to know.

#423 DF: Well, what else can you tell. . . . that's your hearing aid buzzing is it. . . .How did

things change from your perspective in your supplying the seismic industry over the years? You've taken me into the 40's, did things change in the 50's, product, demand, anything?

GB: Yes. In the 40's the crews moved north, north, north. Explosives Ltd. in southern Alberta was almost left with nothing but the Pincher Creek seismic work and the coal mines. We could see that it was just a matter of time before there was no further oil exploration in southern Alberta or at least that's what we thought. In about 1956 or 7 a man by the name of Horace Mann from Texas came up to teach these Canucks a thing or two about the seismic supply business.

DF: So he was going to teach you a lesson was he?

GB: Taught us a good one. With CIL as the sole manufacturer of explosives, they had the country divided up into little dealerships. Explosives Ltd. had Lethbridge, Medicine Hat. We could go north to Vulcan, west to Stavely. Of course, the Crows Nest Pass was our bailiwick for years but the Calgary market was CIL's sell direct market but we were not allowed in it. I mentioned earlier, this man Harrison in Drumheller, he sold his business to Tom Webb. Tom Webb had the Drumheller, Alex, Red Deer preserve for his territory. Out of Edmonton, CIL sold direct. So then you moved north and you had Dick Strazer operating out of Valleyview. Strazer had the best territory of any of us. From there to the Arctic.

#489 DF: That's huge.

GB: So this guy, Horace Mann came up and he said to CIL, what do you mean, restricted territories, I go where the crews go and that was it period. So Horace Mann put a magazine at the fork of the road at Fort Macleod, #3 highway. That choked off our business at Pincher Creek and north to Claresholm. Well, they didn't want to take it lying down so we put a magazine into Pincher Creek and that stymied Horace Mann in our territory but he practically took over Calgary because CIL was this civil service bureaucratic deal. We must have your order by 2:00 and so on. Mann just gave service and he plain out serviced the existing explosive distributors. The blessing was he didn't know to charge for it. And in 2 years he owed CIL over \$600,000. He owed Economy Mud Company \$150,000 and he was bankrupt. But he taught us a lesson. So I bought some of his equipment at a receiver sale and in the spring of 1958 we moved to Calgary. In the fall of '58, Strazer was in financial difficulties. He too hadn't been able to charge for what he was giving. He had a 182 Cessna, if a crew was in a pinch, they could fly in 5 or 6 cases of powder. . .

End of tape.

DF: So just to get you to rephrase that last bit. So he had a 182 Cessna and how did he use that?

GB: That he used for his own pleasure and for visiting his magazine locations. But also to help a crew out in a pinch, he'd fly in 3 or 4 cases of powder. Great service but Dick was encouraged by CIL to get out of business would be I guess the most polite way. So Dick invited me or Explosives Ltd. to purchase his assets, which we did. We bought his magazine facilities at Valleyview, Fort Assiniboine, Peace River, Dawson Creek, Fort St. John, Fort Nelson and Whitehorse.

DF: Quite a group of magazines.

GB: Now did this put you in competition with CIL, your supplier or not?

GB: CIL is the sole manufacturer.

DF: So what did they think of you doing this?

GB: CIL encouraged us because we could write a cheque that the bank would pass. Now Strazer also had an operation in Vancouver that included a boat to deliver explosives up and down the coast to logging camps. And all the time that this was going on I was President of Western Canada Hardware.

#027 DF: And that was a chain?

GB: No, that was Lethbridge. My mentor at the time was also our auditor, George A. Young. George said you can only go ahead with this Strazer purchase if you've got somebody to run it that's competent. You're spread too thin as it is. But he said, I'll tell you, I've gone over their books thoroughly, completely during the week that I went off with Strazer to look at these magazine sites, George Young remained in Edmonton, met with their auditor with Strazer's permission, got all the information he needed. When I arrived back on Friday he said, Gordon, eliminate the airplane and you've got a profitable company. So Saturday Strazer and I agreed on a deal. Our banker was Allan Johnson of the Bank of Commerce, who coincidentally was a brother-in-law of Norm Christie. At any rate I had to phone Johnson and tell him this deal's much more expensive than you and I had discussed. Fine, leave it with me, I'll send you a wire. I wish I'd kept the telegram, it's an absolute charm for brevity. Deal okay, Allan. Strazer and I completed our deal. A chap by the name of Don Telfer who had been the Alberta manager of Canadian Liquid Air, agreed to join Explosives Ltd. as General Manager. I knew him because one of my other enterprises was Western Canada Welding Products which was a Liquid Air distributor. It's the similarity between the compressed gas business and the explosives, seismic business in that a major cost component is transportation. If you manage your transportation you can be profitable. If you don't you'll lose your shirt. So Telfer was well acquainted with the movement of bulk weighty stuff as economically as possible.

#072 DF: So Don Telfer became your manager then?

GB: In 1958. The fall of '58, he actually commenced April 1st, '59.

DF: So this was a big step for your company then wasn't it?

GB: A very, very major step. We are today the largest in Canada and amongst the top 10 in

North America. And basically this is the start of it all.

DF: So your company is a going concern to this day eh?

GB: Very much so.

DF: When did you get out of the day to day operations, how long have you been retired? Or are you retired yet?

GB: Yes, I am pretty well retired. Officially I guess I retired in 1986. I remained Chairman after that, which is almost an honorary title.

#089 DF: Have you seen any other things change in the seismic industry from your perspective?

GB: Sure. They moved into 3-D seismic. They moved out of high velocity gelatin to today, about 50% of seismic explosives are no longer nitroglycerin explosives.

DF: What are they then?

GB: Various emulsions based on ammonium nitrate.

DF: And when did that change begin?

GB: When Texas City blew up.

DF: Okay you'll have to explain that to me.

GB: Well, a boat load of ammonium nitrate exploded in Texas City and it leveled Texas City.

DF: What year was that?

GB: Early 50's. That changed the explosives business completely. It was just a matter of time before the production of nitroglycerine explosives.

DF: Why did the ammonium nitrate give it run for its money, is it better, easier to handle, cheaper, what?

GB: Well, do you know what ammonium nitrate is?

DF: It's fertilizer.

GB: Exactly. It's pretty cheap. So what do you add to it?

DF: Diesel.

GB: And that's pretty cheap. So what have you got? You've got a very inexpensive explosive. Now I'm oversimplifying it because that is the absolute rock bottom of explosives today. But from that, from research and development they've got additives that contribute to sensitivity that will remain combustible in a wet hole. Also there's been a great move away from the use of packaged explosives and we are now in an era of bulk explosives.

#124 DF: And what caused that change?

GB: Money. Always. It is more economical to drill a 5" hole, put an ammonium nitrate explosive down that hole and detonate it than it is to drill a 1 1/8" hole and put a packaged explosive down and detonate it but your net result is the same. It's the overburden that you've moved or the ore that you've made accessible to a loading machine.

DF: Any other changes you've seen? The seismic has other ways of getting a signal now, how did that affect the sale of explosives, like Vibroseis and things like that?

GB: Vibroseis has probably taken 1/3 of the market. If you want to talk recent times, I would refer you to Bill Cherniak. Bill is the seismic sales manager of Explosives Ltd. He's an

ex-Western Geophysical man. Very knowledgeable, very up to date. He would be a valuable asset for you, for everything say, from 1970 forward.

- #154 DF: Any stories that you might want to tell us about the seismic industry, any characters, anything at all that pops to mind?
- GB: Not really. I was never down in the trenches calling on the individual crews. So that I don't have the good yarns that come out of the beer parlors.
- DF: How much of your business came from the seismic industry on average over the years?
- GB: From a low of 25% to a high of maybe 40%.
- DF: And when was the high and when was the low?
- GB: Well, the low was when the crews first started to come, the peak was following Leduc, when we would have over 100 crews operating in the province. Cherniak can give you. . . because there's a big difference. In the Peace River block, we used to joke that you could get a seismic reading with a firecracker, whereas in the foothills they were loading anywhere up to 100 pounds. So it wasn't necessarily how many crews were out, it's where they were out. Whether it was heavy shooting or light shooting.
- DF: What was the range. I mean, you obviously didn't
- GB: Let's say ½ pound up to 100.
- #184 DF: Now you mentioned when you were talking about these other suppliers that transportation was a major problem or major factor. Transportation just to your magazine, like did the seismic crews come to you or did you deliver in the field?
- GB: We delivered it to point of use.
- DF: You did eh? So that's a lot of trucks.
- GB: it certainly is.
- DF: How about in remote areas, did you have all-terrain vehicles or how did you get it around?
- GB: Well, it depends on how remote. In the muskeg, you've heard of seismic trails, that's how we got in.
- DF: But were you using trucks or tracked vehicles or what?
- GB: Trucks.
- DF: Only trucks, yes.
- GB: Now of course, there are some crews that are helicopter supplies. Again you're better on this stuff to be talking to Cherniak.
- DF: So it was always supplied right to the point of use?
- GB: Yes. The standard procedure is the crew will phone today, I want it tomorrow. There's very, very little lead time. And it's the supplier that gives the service that gets the business.
- DF: So that was your problem.
- GB: Pretty much.
- DF: Even though they could have ordered it 2 or 3 days in advance they didn't eh?
- GB: That's not completely right. Consumption varies and they might have had a heavy day and the shooter comes into the Party Chief. We need more powder, phone them, they'll

have it here.

#211 DF: So you never had any accidents with the powder?

GB: Never.

DF: Before we went on tape I asked you if you knew Charlie Stalnacher from Montana.

GB: I know the name, I did not know the man.

DF: Because he had a little factory down there but he made nitroglycerine. So he was dealing with a very different product than you.

GB: Oh sure, no comparison.

DF: The liquid was pretty dangerous stuff.

GB: Yes. Very sensitive. You may have noticed this fellow trying to bring some in from Sidney. He had it in sawdust, straight liquid, it's pretty dangerous. Myron Zandmer was the only one that I knew that was bringing in this liquid nitro.

DF: See, Charlie Stalnacher was supplying the Turner Valley field for fracturing the wells.

GB: I know that's what Myron Zandmer did and if you say it came from him I accept that.

DF: But your explosives were never used in the wells themselves?

GB: No.

DF: No, just for seismic work.

GB: The closest we came was on a dry hole when they wanted to pull the casing to reuse, they used an explosive known as 100% SNG, which was 100% solid nitroglycerine.

DF: And what did that do to the casing, break it free of the cement?

GB: Yes.

DF: Any other uses in the oil industry for any of your products, your explosives?

GB: Not in the seismic industry.

DF: Anything else you'd like to tell me about the seismic industry?

GB: I don't think there's much else for me to tell you. We're just, let's say a minor player in the industry. It starts with the explosion but after that we're out.

DF: Very good. Well, Mr. Black on behalf of the Petroleum Industry Oral History Project, I'd like to thank you so much for taking this time this afternoon to tell us about your story and about the way you and the seismic industry grew up together and we'll end the interview at this time. Thank you very much.

GB: You're welcome.