

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Art Baptie

INTERVIEWER: David Finch

DATE: January 27th, 2000

DF: Today is January 27th, 2000 and we are with Mr. Art Baptie at the CSEG offices in downtown Calgary. My name is David Finch. Could you start Mr. Baptie by telling us where you were born?

AB: I was born in Calgary in 1934 at the Holy Cross Hospital.

DF: One of those few native Calgarians. Tell me about your education, where did you go to school?

AB: I went to school at North Calgary Junior High which is no longer, down on Nose Creek, kind of a country school, Balmoral and then Western Canada High School.

DF: How did you get interested in the sciences?

AB: My dad had a service station on 7th Ave. and 5th St. west, pretty close to where we're sitting right now and he had customers like Shell Oil Co., Sun Oil Co. and Gulf at that time. And I was working for him, just after I had got out of school, in fact I had quit school and he put me to work. And a fellow came in from Sun Oil Company one day and he said, would you like to go to work for us and I said, sure and my dad, he just about pushed me out the door. He asked me my age and at the time I think I was 15 and when he asked me, My dad spoke up and said, he's 18. So the next day I left for work, I went to a place called Wetaskiwin, Alberta and this was for the production department of Sun Oil Co. who kind of worked with the seismic end of it, we were side by side all the time. My first job was up in Wetaskiwin and we dug a basement for a big rig and cemented it in and dug what they call dead men on to the side. And then about three days later we went up to a place called Beedee Creek on the mile 163 on the Mackenzie Highway. It was a no place, it was just a spot and this picture here was our camp. There was only a couple of places. . . Imperial Oil had a camp up north of us and it was a big rig camp at a place called High Level, which at that time was just one service station. There was a clapboard cabin with pumps out in front of it. And we went in there and built an airstrip and . . .

#026 DF: Where was this, what mile?

AB: Mile 163.

DF: Okay. So you built an airstrip here and tell me about these airplanes, what's this?

AB: That's . . . can I come back on this.

DF: Okay. And there's a Cessna here.

AB: That was a little Cessna Aronca Chief.

DF: What was it used for?

AB: It was used for picking up mail and some supplies. We used to fly to Manning on this and pick up mail and some groceries and stuff like that.

DF: And the bigger plane, what was it used for?

AB: It was used to transport more groceries and bigger stuff from Calgary.

DF: But there were roads here.

AB: One road, one gravel road from Peace River and that was the Mackenzie Highway north and it was not much of a road in those days. In fact, it was fairly new.

DF: So this is your camp here. . .and how big were those buildings?

AB: They were about 8' x 20' and they held six men.

DF: What were they laid out like inside?

AB: We just had bunks. We had a stove as you go in at the door and a set of bunks and a set of bunks and a set of bunks. Not much to it, it was comfortable and it was warm

#040 DF: So what were the men doing that lived in this camp?

AB: Part of the men that were in this camp were with the seismic crew, I'd say 3/4 of the men were with the seismic crew and about 1/4 of us were with. . . we built the roads and maintained the camp with water and diesel fuel and the stoves and cooks and stuff like that. The seismic crew just went out and drilled and shot the holes.

DF: And you were working with which part of the organization?

AB: I was working with the production which was building the roads, with Sun Oil Company.

DF: And what exactly were you doing?

AB: I started out with Sun as a supply truck driver, driving supplies from a little town called Manning, which was south of there, it was 145 miles or something from camp. And picking up the mail and stuff like that. And then in the wintertime, when the snow got too deep and the roads were just too bad, we started using the planes and I did everything. I was a camp attendant and a cook's helper and sometimes I'd be back in the bush in another camp and doing everything.

#053 DF: So what kind of plane is that, do you remember yet?

AB: It was in the beginning of World War II and they used them for bomber practice and I just can't think of the name right now.

DF: Okay maybe later. So what else did you have from this period? We're looking at a scrap book that his wife prepared for him when he retired and there's a whole bunch of pictures in here and so whenever he points to something I'll try to describe it. So we're on the page now with tracked vehicles and cats and different things like that. So how did you come into this part of the business.

AB: Okay this is the same thing, Sun Oil Company. We worked year round on this or tried to. This tracked vehicle that I'm showing you right now is a Fordson tractor with tracks on it, which was one of the first tracked vehicles that was ever introduced into the business. And we used to haul fuel with them, groceries. A lot of time in the summer time we lived in pup tents out in the muskeg and this is how we got around.

DF: Tell me about how those worked, what did they do well, what problems did you have?

AB: We never found that they worked well at all but the problems we had was when you were going up an incline, a lot of times they tipped over backwards. And when you were in the deepest muskeg they were always throwing tracks. You were always wading up to your

waist, hunting for the track then trying to get the vehicle winched out by the fellow that was with you and then putting the track back on. It was just awful. This is part of the airstrip in the camp from high up. In the spring when we used to haul back and forth, this is me beside the pick-up that I used to haul with, we'd run into situations like this. This is what they call the Whitemud Creed flood and sometimes you'd be there for a couple of days waiting for the water to go down so that we could get back to camp or into town or something like that.

#076 DF: And this was near your camp?

AB: No, this was south of Manning. This is some of the ways that people got through these floods by. . the farmers would get out with their horses and a wagon and pull you through.

DF: Now you said, you tried to operate year round, what times of the year did you have troubles?

AB: Summertime was our biggest problem because it was so wet. You've got to remember that at this time of our lives, in 1949 and 1950, there had not been any crews up in this country. There was no trials or anything, so we had to cut all our own.

DF: How did you cut them?

AB: with the cat in the wintertime and in the summertime we would pick places like. . there was a lot of muskeg open areas and we would scoot through those open areas and then move over to another one. Sometimes we'd take axes and saws and cut the willows off, it was mostly all willows and then we would go through into another big area. And we'd pick places in the muskeg that were hummocks that we could use pup tents on and that's where we'd stay. What we were doing was hauling fuel in for the winter in areas where they could get the cats in, in the wintertime and then we would take and put these fuel caches in and then move on to the next one. So they really didn't care how we got in there. They sent a surveyor with us to tell us where we were to put these caches in and then we would haul it in there the best way we could and then get out of there.

#093 DF: So you were just hauling in. . .

AB: Diesel fuel mostly.

DF: In barrels?

AB: No, we had these tankers on these tracks, like shown in this picture.

DF: Okay. And then you would leave the tank there and go out and get some more?

AB: Yes, that's right.

DF: So how long did you do this for Sun?

AB: I did this for Sun for two years.

DF: So you weren't doing any seismic yet?

AB: No seismic yet.

DF: This was all just production?

AB: That's right. And then in 1951 I joined a company called Frontier Geophysical. And we went into . . .let's see, what was the first place I went. . .

DF: How did you get hired by them?

AB: I just went, actually I just kind of went to their office and applied for a job and got on.

And at the time, I did not know it but Ted Rozsa, who owned Frontier Geophysical at that time had worked for Shell and knew my dad pretty good so that kind of helped a little bit. And I worked for Frontier Geophysical for a year and then I went to work for National Geophysical.

#106 DF: And what were you doing for these companies, you didn't have any geophysical background?

AB: No, I did not. I started out as a drill helper and a shooter's helper and a jug hound.

DF: Can you describe each of those jobs for me?

AB: A drill helper is a person on a shot hole drilling rig who shovels all the cuttings and handles the pipe and does all the rough work, the driller handles the controls.

DF: And the shooter's helper?

AB: The shooter's helper, he loads holes with dynamite and loading poles, pushing the dynamite down the drilled shot hole.

DF: How much dynamite would you put in a hole?

AB: In those days we were using 20 pounds per hole, was the normal charge.

DF: And how far down were you putting that?

AB: About 60'. That was a normal type of shot in those times.

DF: So driller's helper, shooter's helper and then what did you do?

AB: What we called a jug hound.

DF: Describe that.

AB: A jug hound is the person who lays out cable and geophones on the ground with the recording crew.

DF: So you learned all this just in the field?

AB: Yes. Just in the field. In the field, if you worked hard and worked well, they promoted you pretty fast. So a lot of times you could be working for a month in one job, like as a shooter's helper and then they made you a shooter. You could be working as a drill helper for two or three months and you'd be a driller. It was that good and that fast.

DF: Boom times.

AB: Yes. Boom times and not a lot of people in it and as I say, if you worked hard, they treated you well.

#126 DF: Good pay?

AB: No. The pay in those days. . . I think the most we made was \$200 a month. I can't recall ever getting overtime and we'd work 7 days a week and about 12-14 hours a day. But it was an adventure. You were moving around to different towns and it was a lot of fun. The nights were good and the days were. . . some Sundays, in the summertime you usually got Sunday off so that was good. Then in about. . . I went down to the States for 6 months to go to work for Shell Oil Company and . . .

DF: What year?

AB: That would be 1954. And I went down there to go to work on a marine crew with Shell Oil Co. and as it turned out I had to get my citizenship to go to work out there. And at the time the Korean War was on and I did not . . . the first thing they warned me about was

you can be conscripted into the forces. And I thought I don't really think I want that so I went . . . and then the fellow that I was visiting down there was with Shell Oil Co. He left them and started a gravel pit so I helped him move that as an illegal immigrant and I stayed for the 6 months in Houston and surrounding area and then I went back to Canada. My dad had a drilling rig at that time and we went through a kind of mini-depression in the oil business at that time and he could not get a job and he went back to a service station. And he phoned me up and he said, will you come home and operate the drill and I said, sure and I did and we had an awful time trying to get a contract for it and finally my dad had to give it up and so I went to work for a company called SIE, which was a supply company that started up in Canada about 1949. Now SIE stands for Southwestern Industrial Electronics and SIE was one of the very few supply companies up here. They had geophones and recording instruments, playback instruments of that era. At that time recording was done with paper and chemicals, there was no magnetic tapes or anything like that. You had a camera in your recorder and you recorded the wiggly lines on paper and you developed it in the recording cab.

#158 DF: Did you do any of that?

AB: Yes. I sure did. Part of when I was doodle-bugging I was a JO and did part of that.

DF: What's a JO?

AB: A Junior Operator. I'm sorry I use expressions because I've used them all my life. But anyway I joined SIE and I was inventory controller for them for awhile.

DF: Here in Calgary?

AB: Yes, here in Calgary. I think two or three years I was inventory controller. And the position of a salesman came up and they asked me if I would take it and I said, sure, I sure would, I'd really be delighted in that. So that's when I started in the sales end of the supply business. And I guess through the rest of my career I never did get out of that, though I run companies I was always just kind of salesman.

DF: So you've been in the supply, sales business ever since eh?

AB: Ever since. 1959 I went on the road with SIE and we used to travel, this picture here was a 1959 Meteor car, and we took the back seat out of it and we used to haul fixer and developer and paper, anything that we could get in there that we were selling in the supply business. And I used to travel around on these muskeg roads that were just bulldozed out to all the camps that were in there. And this particular area, the first year I was in, 1959, we were up in Fort Nelson and I put on that car, about 300,000 miles driving and a lot of that was just muskeg roads. We used to travel on them at night. We would travel during the day out to ??? and then we'd finally end up at the furthest crew away which might be 100 miles out in the bush. And you would be in low gear all the time because the muskeg clumps were so bad that you couldn't get any speed at all. And then you'd drive back at night because that was the safest time to do it because of the turns and everything. If there were trucks on the road you could see them coming. One time, I'll tell you a little story about this, I was driving a way, way east of Fort Nelson and I was going along the trail and I was coming back from this camp and it must have been about 1:00 in the morning. I could see the northern lights, it was colder than sin, it must

have been about 40 below and just still as could be and I had to go to the bathroom. Anyway I stopped the car and I shut it off and I was watching the northern lights and I could hear this giggling and I thought I must be crazy, so I listened and I could hear a motor start up and then I'd hear, ha, ha, that's funny. So I thought, oh my god, started it up, went down the trail and here's two guys with Farney Exploration, two Party Managers and they were coming back to camp and both of them had been drinking, they had left Fort Nelson and they were half bombed and their fuel pump went out on the truck and it was loaded with groceries and stuff. One would stand on the running board and he would blow like hell down into the tank while the other drove it and then when he ran out of breath the other would jump out and he would do it and they would laugh like hell and then get back in. I was probably 20 miles from camp so I turned around and took them back in so they could get a vehicle and get out there and tow the truck in. It was so funny.

#202 DF: Okay, so tell me a little more about this car, it was just a plain regular car.

AB: Plain jane, 1959 Meteor.

DF: And you said low gear so it wasn't automatic.

AB: I was automatic but you'd put it down into low and that was it.

DF: And you said the back seat was out, so you could carry some stuff. You were carrying supplies, you weren't selling geophones and equipment, they supplies that. . .

AB: Oh no. Just the supplies that the recording crews used mostly.

DF: Right. And then if they needed to buy something from you they could put in an order.

AB: Oh yes. And I would go back into Fort Nelson and phone it into Calgary.

DF: And they'd fly it out. . ?

AB: Oh yes. If it wasn't something I had or something that was a large amount then that's what I would do, I would phone it into Calgary and they'd ship it usually by bus or whatever to get it up there.

DF: And then you'd deliver this out to the crews?

AB: No. The one thing that was always happening was, the Party Managers were always coming into town and so you always, if I had a motel unit or a hotel unit, always had either a couple of rooms, lots of beds because they would be coming into town and you knew never knew what time they would get into town and so you wanted to have a bed for those Party Managers. That was part of the business. So they would come in and they would know that, Art's got a hotel room with 3 beds or 2 beds or 2 rooms and so we'll stay there. We always had a room for them.

#219 DF: So explain to me a bit more. So the Party Manager, he wasn't actually. . I mean he was in charge of everything but it sounds like he had to be a logistical expert to keep all this stuff.

AB: That's exactly right. He had to be a logistical expert, he had to be a babysitter, he did everything because he was the man that looked after the crew. If there was a move he made sure that the trucks were there to move the camp, the boys had a place to stay that night if they couldn't make it to the camp, that they'd go through a town, that the surveyors had started on the next project, he did everything.

DF: How about alcohol, did he have to keep an eye on that?

AB: Yes he did. Earlier. . . it wasn't a real problem because alcohol wasn't allowed in camps and so it wasn't a real. . . I mean there was always somebody that smuggled something in but that wasn't a real problem. Probably the worst people for drinking were the surveyors and they'd usually come back into camp just . . . for the first three days they'd be shaking and you couldn't survey or anything. I shouldn't say that because I'll have all the surveyors on my back.

#233 DF: Okay on this page here, what's this?

AB: That's a river scow that was on the Fort Nelson River and in the wintertime they used to pull them up on the banks and just let them sit. There was big barges and everything. That's how most of the country was supplied in those days. This here is a picture of a trapper going out to. . . no, I'm sorry, it isn't a trapper, it's a missionary with the Jesuit faith, he used to go out and visit the Indians and he'd come along and he'd say, he'd find a camp that was away out there and he'd say, can I leave my truck here and we'd say, yes you sure can but we're moving in a month. Oh that's all right, I'll be back and he'd say, if you move just leave it here, I'll get it going. And then he'd unload his dog team and his sleighs and away he would go and he would administer to the Indians living way out in the bush. And in those days there were quite a few camps of Indians that hardly ever seen a town. They were way back in the bush. So he would try to convert them and do baptisms and stuff like that. Old Sikorsky helicopter, we used to use those quite a bit.

#248 DF: You personally, or is this the company's?

AB: The company's. And I would go out with them lots of times to camps and stuff like that if we were introducing something.

DF: Do you remember the number of that one?

AB: Gosh I sure don't.

DF: It's just an early one. Remember the name of that airplane yet.

AB: No.

DF: Okay so, we're on to a page with some drilling equipment.

AB: Okay. I was with SIE until 1962. In 1962 some friends of mine who had been with SIE had left them also in Houston and started up a company called Hall-Sears and come to Calgary with it. Which turned into a company very shortly after, called Geo Space. Now at that time they were a new start-up and a competitor. They were a company that manufactured instruments, geophones, we introduced miniature geophones. Can I digress just a little bit here. In the late 1950's and early 60's geophones were big. When we started out very early there was what they call one geophone per trace, which means every trace on the recording instrument had one geophone which was recording the information that it was set out to do. As time went on, into about 1954 or '53, they started introducing strings of geophones and the normal in Canada was 9 phones per trace. There were nine phones, usually rigged up in a 3, 3, 3 series parallel arrangement. Because the phones were big, they were heavy.

#282 DF: Okay, how big exactly?

AB: When they come out to 9 phones per trace they were about 2 1/2" around and about 2" tall.

DF: And how much did they weigh?

AB: Half a pound.

DF: And before that, the bigger ones, how big were they?

AB: They were probably . . . well, there were so many different kinds but the normal was about 4" around and maybe 6-8" tall and they were darn heavy. A person could only carry about 6 of those and then you had arms like a gorilla.

DF: So they were several pounds apiece.

AB: Yes. They were really heavy.

DF: So they big ones and then the smaller ones. . .

AB: And then the smaller ones and then when Hall-sears came up here to Canada, we came up solely to introduce a very, very small, miniature phone which would be 1/2" wide by 1" long. Very, very light. And this went over pretty good and it caused most everybody else that was in the geophones business to miniaturize their phones.

DF: Just let me interrupt you, the bigger ones I could see where you would just place those on the ground but these little ones, how did you get them to stay in place, was there a spike on the bottom or something?

AB: Yes. We had a spike on the bottom. And in the wintertime we had what they call a winter base which was a cup or flat base and you put it on the ground. What you did was you kicked away the snow and put this down and you found the ground so that you could have a good coupling to the ground. And that's how you laid it out and you usually had 9 phones per trace. Then the phones went . . . I'm going to stop you for just a minute, I've got a whole museum of geophones. The phones went from the very small miniature to a little larger because the recording instruments stated to get better and better, magnetic tape come in and so they couldn't get all the electronic physical parts to a geophone in a very small case. So they went a little bit larger but not much. It was a big improvement in geophones, in the technology.

#313 DF: In quality?

AB: In quality. And they were forced into this and so this came along and they kind of got a little bit bigger and a little bit better and the instruments got a little bit bigger and a little bit better. CDP shooting came into

DF: CDP standing for?

AB: Continuous Depth Point recording. And so at that time, drilling had to improve. Before that we were using what we call conventional drills. . .how am I going to describe a conventional drill, it's a drill that uses strictly drill pipe, a bit, a mud pit and you drill down, you could drill rock or anything but it was slow. So Geo Space at that time had worked with a company. . . .

DF: Was that rotary drilling or

AB: No. Rotary drilling, it was always rotary drilling in our business.

DF: Because water well drilling isn't always rotary drilling.

AB: No it was a cable tool. But mostly since the early 40's and that, rotary drilling came out

and it was much superior to . . . it was too slow to do cable tool. And so we brought out what they call an auger drill, which is like drilling with a wood auger bit.

DF: How is that different from the previous system?

AB: This had flights on it. You didn't have a pit to put in the ground, you pumped water down through the pipe but in a very slow amount and it come up through the bit and the bit was like a drill bit for drilling wood that a carpenter uses and it had flights on it and so the mud. . .you just had to moisten that and the mud would come up that and out of the hole.

DF: What is a flight?

AB: A flight is the auger part of the bit, that's what the call a flight.

#340 DF: Okay, and that continued up the whole string.

AB: All the way, every ten feet of pipe had all this flight on it. So the cuttings would come up that and come to the surface and so you didn't have what they call a mud it to catch the cuttings. And you can see, in that there, you can see the flights on it. And so at that time. .

DF: So just let me interrupt you. So what you're calling flights, just so I'm getting it right here, are just the corkscrews on the. . .

AB: That's right. So we introduced. . .now, we had to modify it, this drill was made for the southern States and it was made. . they usually had them on buggies and they floated out into the areas that were really salt marshes and stuff, along the Gulf. So coming up here to Canada, we had to modify it because we had to winterize it, number one, we had to have exhaust running through to the different pumps, at the same time, these first drills that we brought out were what we called a combination auger and conventional. We could convert to conventional drilling if the drilling really got tough or we could go to auger drilling, which they were designed for. We built a water tank on the rig, we covered up the pumps, we diverted the exhaust from the drill truck around through to keep everything thawed out in the wintertime. And it worked really good.

#361 DF: Down to 40 below?

AB: Oh yes. 40-50 below, no problem at all. And there's another time. They're mounted on trucks, Nodwells, Foremosts, any track vehicle, any truck.

DF: How deep did these drill?

AB: They would drill down to 200 feet.

DF: And how big around, 4" hole?

AB: Depending on the bit but it was usually 3 1/2, 3 3/4" hole.

DF: And this is exclusively for setting up shot holes.

AB: Yes. That's all, it's a shot hole rig. What it did is it really started. . .well, there isn't a drill up here in Canada now that isn't an auger drill. They've been modified and modified and they are just great things. Today they will drill 4,500 feet per day. That's what a driller goes out and drills today. He works his bum off but he will drill 4,500 feet per day.

DF: So were you a driller at any stage during your career?

AB: Yes. In the very beginning when I came back from Houston and went out with my dad, that's when I started to drill and then I went out with a company called Veran Drilling and drilled on a conventional at that time.

#381 DF: And can you tell me the details of drilling? Most of us don't know what you would do, just tell me the process, you show up with your truck and your drill, how do you set it up, how do you drill?

AB: Okay. In those days, if you were drilling along roads, they surveyors had marked what they call shot points and that's where you had to drill a hole. Normally it was 60' deep so you would come up on the road, pass the hole, back into the ditch and set up fairly level on that one spot. In those days, we had conventionals as I say, and you would put your pit, what they call your mud pit down, which held water and as the drilling pieces come up from the pit, they would come up through this hole into this pit and at the end of the pit there was a screen and then there was a suction hose in there. And your drill had a big pump on it and it would suck the water out of that, around, up through the derrick and then down through the drill pipe to the bit always keeping the bit lubricated and cleared of all the cuttings. It would wash the cuttings back up to the surface into this pit and you shoveled those cuttings out of that pit. Then you had a 10's stem normally, that was the normal on that, and you would drill down to a depth of 60' and you would pull everything out. . .

#403 DF: Just a sec, so when you're drilling you get down to the end of one piece of stem and then you attach the next one. . .and how do those attach?

AB: They screwed together. There was a male and a female on every drill stem.

DF: And what's turning the drill stem?

AB: There's a rotary. . .

DF: So it's like a big rig, it's just a small one.

AB: Just like a big rig, that's right.

DF: So the little platform that grabs it. . . .

AB: Yes, that's right. And the drill had what they call a callie that fit into the drill stem and the callie is the part that turned the drill stem in through the rotary. And so you would drill down to your 60' hole, usually wash it, bring your drill stem up and down to make sure it was clear and pump a little bit more water down there to make it. . . you know, if it was a good clay hole or a good clear hole. And then you'd pull your stem out and then you'd put your dynamite together.

DF: Is there still water in the hole at this point?

AB: They always wanted water left in the hole for what they call tamping. And that means that when the dynamite was down there and you had a column of water over it, it would hold the explosive charge, make it more powerful at the bottom of the hole. If you had a hole that was dry then it would just blow all the energy up and you wouldn't get much energy down.

#424 DF: And what you are trying to do is get that energy to go down into the ground, not come out into the air. Now when I've seen film footage of a shot hole going off, you see this big column of water coming out, and that's what it's supposed to do?

AB: Yes, in those days, with that much dynamite, yes it did, just about every one just blew mud and stuff out of the hole.

DF: Did you back fill those holes?

AB: No. In those days, in the very early days you didn't do nothing. You had cutting around them and nothing was done. It wasn't long before there was complaints and they did bring what they call hole plugs in. And when you drilled the hole and you loaded it you would take. . . . the early hole plugs were like a mexican sombrero and you'd turn them upside down and they were metal and you had a little hole that you put the cap leads through and then you would push this down and you'd just kind of push it down into the ground. And if it was on a conventional drill you had a hole about 10-12" anyway so that fit right down in there. And then you just shoveled cuttings over it. The cap leads would be sticking up through the thing and usually you had a lat that you lapped them around so that when the observer or the shooter that's where they were and he knew right where they were and he could hook up to them. So then we went into the. . .

#448 DF: Do you remember when it became necessary, I think regulations were passed that you had to fill those shotholes. Do you know when that was?

AB: I'd be guessing but I would say in about 1957-58. Somewhere in there. The reason I remember that is because at SIE when we first got the hole plugs we used to sell them by the thousands. We would have boxes and boxes, we always seem to be loading and unloading the darn things.

DF: How much did they sell for?

AB: Oh gosh that's something I can't remember.

DF: That's okay, maybe you could. Okay, so what else is there to say about this?

AB: Really not much. We introduced as I say, the 10' auger. That changed drilling to a very high speed method of drilling shotholes and it turned everybody to going into an auger drill and today there's not just anything else but that used.

DF: Now correct me if I'm wrong but wasn't most of the seismic drilling done by contractors, or did companies have their own?

AB: Companies had their own. National Geophysical had their own drills, Frontier had their own drills. There was a lot of contractors had their own drills in those days. And there was contractors but not a lot of them. Western Geophysical, boy they had a pile of them.

DF: The reason I ask that is people like the Seaman Brothers, they got into seismic by drilling didn't they?

AB: That's right.

#480 DF: Can you tell me any of that story, do you remember them?

AB: Yes, I know the Seaman's. Gosh I really don't remember when they went into it, they were into it very early and I can't tell you the details.

DF: Did you sell to them?

AB: No I did not because they were out of it when I was introducing these. They had gone on to bigger and better things like oil companies. You know, really I was, at that time, introducing things. That was my job, we were coming up with new inventions like this next picture that I am looking at is a Dinoseis.

DF: What is it?

AB: It is a surface energy source.

DF: Which means?

AB: Which means that you didn't drill a hole, you just put this right on the surface of the ground and you used a propane and oxygen mixture inside of a container and it banged the ground.

DF: And how did it bang the ground, you ignited this?

AB: You ignited it as an explosion inside of a cylinder.

DF: Right. And so the cylinder is in contact with the ground and you push down on there hard, how.

AB: The inside of the gun was a great huge mass of steel.

DF: How big?

AB: It would weigh about 500 pounds.

DF: No but how big is this cylinder?

AB: It was 24".

DF: Across and how deep?

AB: Two feet deep. The bottom of the big mass. . .it was like a piston in a car, upside down. It had a concave area on the bottom, that's where the mixture of oxygen and propane went in. It was set off by a spark plug and the idea of the big mass was to hold the weight down and the outer cylinder would hit the ground, would push into the ground. There was o-rings around the big mass inside to act like rings in a car. It would allow this cylinder to come down. It was new, it was an invention by Sinclair Oil Company, we took up the patent and introduced it into the field. It did pretty good in warm climates.

#528 DF: You said we took up the patent, who's we?

AB: Geo Space. We built the machines and we introduced them.

DF: You built them and everything?

AB: So in the summertime as I say, when it was warm these were good. In the cold when it got down to 40 below, propane would not flow into a gas and we had an awful time. One time we flew them up to Alaska for Teledyne, working for Atlantic Richfield at that time. And we took them away up into the Brooks Range and it was cold and windy and they'd go out to the field and they would work for a very little while and then you'd be shut down. Now a byproduct of propane and oxygen is water and when it got cold your propane wouldn't flow and when it did you produced water and it froze up and so we had to come up with something. Here we were way up in the Brooks Range of Alaska, with a lot of expense going to fly these, we had two machines up there, which would be eight guns and so. . . .

End of tape.

Tape 1 Side 2

DF: Okay, so explain to me what you were just saying there, you had two crews up there?

AB: No, just two machines.

DF: And you said eight guys.

AB: Eight guns, there were four guns on each machine. They were mounted on Foremost's, the track machines and they had four guns on each track machine.

DF: And they all went off at once.

AB: And they all went off at once. It was all radio controlled. And then we found that when it got cold, we froze up all the time. So we had to do something, we were always. . . we were working 20 hours a day trying to keep these things running. It was cold, it was black, it was never light, it was awful, it was the worst time in my whole life. So we come up with the idea that we had to cover them in. So we set out to Fairbanks for a whole bunch of pipe and canvas and threads and needles and we literally sewed these things on to the back of these track vehicles. And we put a Herman Nelson heater in there and that worked pretty good, that worked darn good. We'd leave them running 24 hours a day and we finally were getting some records.

#013 DF: Okay, so explain to me, you were heating everything, you were heating the container that held the propane and you also were heating the tanks that held the oxygen as well as your guns, you were heating them so . . .

AB: The guns when they were in the up position were heated, yes. And then when they were down they were firing so they created their own heat. And we also put compressors on these machines so that when it went off a timed sequence of air would come through and blow out the moisture. So that worked out not too bad. The Dinoseis never really did catch on, it cause too many problems and the Vibroseis came in at that time and it was more reliable than the Dinoseis so people bought it more than they ever would . . .

DF: Okay, what's this here?

AB: That is the gun, just the top removed off of it.

DF: And Vibroseis, explain to me how that's different from Dinoseis.

AB: Vibroseis is a machine. . they lower a pad to the ground, a big heavy pad and it is controlled by hydraulics and through the hydraulics , through servo motors, they cause the pad to vibrate from a low frequency up to a high frequency and then back to a low frequency. All controlled by radio and the recording truck.

#028 DF: And how long does that sequence take?

AB: That depends on the sweep that they're making.

DF: But seconds or minutes or what?

AB: Oh no, seconds. On a shotpoint, they would be, depending again, how many times they shoot. They'll shoot or they'll vibrate and move up and vibrate and move up and it depends on the sequence that they're doing, it could take up to two minutes.

DF: But by knowing from the front end the sequence of vibrations that they're creating, that gives them an even better idea as to what they're getting back from the ground.

AB: That's right, the correlate that in the recorder. So the Dinoseis really took off, probably three years of a person's life. And we kind of moved on to bigger and better.

DF: So when did you quit selling Dinoseis?

AB: About 70-71, in there.

DF: And that's when Vibroseis came in.

AB: That was when Vibroseis really took off. We tried Dinoseis in many methods. We mounted them on quadrapods. This picture here is up in the Yukon on I think they called it the Windy Plain. Again we used helicopters, we lowered them to the ground, we had control units out that had all the oxygen and propane, we ran the hoses across the ground, plugged them into each gun. A recorder would tell them when to fill and fire and as a portable operation, this took the place again, of drilling a hole and it worked pretty good. But you couldn't use it in the wintertime and we couldn't use it at all when it was cold. And it took up a lot of helicopter time. We had eight guns up there and you were always, bang, bang, bang and then move so it took a lot of helicopter time.

#048 DF: In his picture here, these quadrapods, I'm just going to get you to describe them. So quadrapod means it's got four legs and the gun is suspended underneath.

AB: In the centre, yes.

DF: And those are 500 pounds apiece, those guns. So the whole thing would weigh?

AB: These were made out of aluminum, it would probably weigh around 700 pounds.

DF: So how many could a chopper carry, just one at a time? And how tall are those things, they look like they're taller than a man?

AB: Yes, they are, they were probably 7 or 8' tall overall. Because they have a cat cylinder in it so when the gun goes off, it does spring into the air and you have to catch it and lower it slowly so that you don't get a second rebound or signal out of the ground. These were some of the engineers that we worked with at Sinclair.

DF: So what did you do next?

AB: Well, I went over to India and tried to sell Foremost's and Dinoseis over there.

DF: Really. So when did you become an agent for Foremost?

AB: I didn't. I went over on behalf of Geo Space and Foremost. I knew them very well and they asked me if I would talk on behalf of both companies.

DF: By the time you started selling the Foremost was it a reliable vehicle. I know the first ones were really awful even by their own admission because I've interviewed them. But by the time you were representing Foremost it was a good. . .

AB: It was a pretty good machine yes. It was a four track machine. It never did fly, like into this generation. But at the time it turned out to be a pretty good machine. It was easy to maintain, it got around pretty darn good.

#065 DF: These are the 1970's and these are the tracked ones, not the big rubber tired ones, right?

AB: No these are the tracked ones. And this is the end of the tracked ones, I think they called them the 600 series. So anyway I went over there and talked to what they call the Oil and Natural Gas Commission about Dinoseis, set up an agency over there with these people

here. And talked to the government. They were interested in using Foremost's in the. . . I can't remember which area it is but anyway it's a big desert where a lot of gold smuggling was going on. And they wanted their customs people to have something that they could run around in this area with, it would sometimes be very wet and sometimes very, very sandy and dry. So the Foremost would work very good though we never did sell any over there.

DF: How long were you in India?

AB: Just three weeks.

DF: Oh. So you didn't sell anything in there at all?

AB: No not a thing. Not in that end of it. We sold to them geophones and instruments and stuff like that but not in that end of things.

DF: To what extent did you get to be familiar with the different kinds of instruments, by this time it's digital right?

AB: Yes. That's right. We're going into digital instruments. I took quite a few courses, I went to school at nights. .

DF: Did you ever finish high school?

AB: Yes I did. By nights. After I got married and I was working for SIE at the time, I thought I better get myself some more education here, so I started taking night courses whenever I could. And I continued doing that, I took some electronic courses and then I took some management courses and continued on that way. Then I came up with a brain wave. . . I worked with a guy. . . we were introduced to him and he at the time was working with what they call shaped charges. It was a two chemical . . . he was blowing under water trenches for pipelines and it worked pretty good. They were berry shaped and you could set them off and they would dig a hole, depending on the size of the charge, exactly straight down. And one day, I don't know what made me think of it, but this is when portable work started really coming in and there wasn't many portable drills at the time. So I got to thinking one time that, this fellow had a pretty good idea, maybe I could come up with it. And I worked and worked and worked, I couldn't remember what chemicals he used and I couldn't remember his name and I couldn't get hold of him. Finally one night when I was sleeping it came to me what the chemicals were. So I used the two of them and started getting these containers together and finally this fellow heard about it and he phoned me, Peter DeMarsh. And he gave me all the information on how to build a shaped charge.

#101 DF: And what chemicals were they?

AB: They were nitro-methane and triethylene diamene. Nitro-methane is kind of a liquid gas that racers put in their cars.

DF: High octane.

AB: Very high octane. And this triethylene diamene was a catalyst, you just put a few ounces in nitro-methane and it was a very, very fast, sharp explosion. The shaped charge had to be a cone, I'm going to have to do some drawing here, so I don't know how you're going to interpret this. But anyway it was a cone like that and it was made out of aluminum and

it had to be a certain thickness through. And we built a fibreglass container around it like this. And we filled this container with nitro-methane and we'd put in a few ounces of triethylene diamene and we had a cap over top of that. And we used what they call a booster cap in there with an electrical cap. When that thing went off, this aluminum, it was so fast and sharp and hot that this aluminum would turn into a gas and it would invert itself and it would direct the explosion down. I could blow a hole 4" around and about 3' deep in the ground and never disturb the grass on the surface. Now there's a lot of shrapnel from this.

#120 DF: Shrapnel from what part?

AB: From this fibreglass cone.

DF: Oh the fibreglass cone disintegrated.

AB: Yes. This is what they looked like. Just disintegrated. You had to be quite a ways back from them. I used to just tear the hell out of my wife because when I was experimenting. . . I live out in Bragg Creek, and at that time nobody lived around me so I used to go out in my back 40 and I'd never tell her. I'd go back with a bunch of these, I'd drive my vehicle up this trail and I'd go back into the trees and I'd set some of these things up and then I'd start blowing them to see if I was getting Because I had to put them on stands. To get the right amount of impact to the ground and to get a good signal down I had to put them on little lathe stands. I'd take lathe around at different heights and I had to experiment with this. And when it went off my house would shake like a son-of-a-gun, my wife and daughter would come flying out down the road, trying to find dad to see if he had blown himself up. So then I started. . . I got permission from the rangers to use an old well sight west of Bragg Creek and that's where I started doing this experimenting and as you can see from this picture, we went into the bush and we had Pacific 66 at that time, whose Chief Geophysicist was Stan Oskowski. Anyway we went out and we tried this and we did quite a few little jobs. It fell on it's face. . . we had a crew working in the summertime and it was very dry down in through southwest Alberta, up, I think, in the Porcupine Hills and we set a few grass fires going so we decided this wasn't the best thing in the world. We might get sued or something so we dropped it. And at the same time people like CIL and Dupont were coming out. . . again, they actually copied us but they were using slurries to do the same thing and their's was a lot cheaper and better than us but at least we got people started on surface energy.

#146 DF: So what years were you doing this?

AB: This would be 1975, somewhere in there. I'm sorry, I'm pretty bad on times.

DF: Just get us close and we can figure it out if we need to.

AB: In the business we were in, we always had conventions. The SEG convention is probably world-wide and every year there is one. In fact, in 2000 Calgary is getting the SEG. And so this is the time when you went wherever the convention was held, it was usually New Orleans or Houston or someplace, Washington and we had to stand in a booth all day talking to everybody. There's one thing about the business of doodle-bugging. No matter where you were in the world you ran into somebody you knew because it's such a small

business and people moved around so much. Their expertises were used all over the world. And so going to conventions you knew most of your American counterparts and the people that you did business with in Calgary. Canada was the greatest place in the world to doodle-bug because everything was in Calgary. All the companies were in Calgary, all the people come to Calgary and so you didn't have far to go to, and so it was like a family. We played together and we worked together and we had golf tournaments together. There's quite a few tournaments that are still held today that were born out of this industry. We have the goof-off golf tournament and the twist-off golf tournament and the doodle-bug tournament and these are all people that are in the business. One time I was down in Houston at a convention and I was with a bunch of people and we decided to hell with this, we're going to leave early and go to Las Vegas and play golf. And I checked into the MGM Hotel and I was the only one in our group that arrived in there, I was a little bit earlier than everybody else. I'd never been to Las Vegas before and I checked into the MGM and the damn thing caught fire and I was trapped in there for about 2 ½ hours.

#174 DF: How did you get out?

AB: We waited it out and about 86 people died in it.

DF: But not you.

AB: Not me. We had it pretty well set-up so. . .there was a lot of old people, it was all old people and another guy and I had it set up so that if things got really bad, we had a whole bunch of blankets and fire hose that we'd cut off and we were going to lower people down if it came up to us. But they finally got it out enough for us to go down the stairs.

DF: What floor were you on?

AB: 10th. It's one of those things I'll never forget. You can read this, this is my wife telling about it because she didn't know where I was. And I was Chairman of the doodle-bug golf tournament, this is me making a speech. Now this was a kind of funny time, the year that I

#187 DF: Now let me interrupt you here, you were a member of the CSEG but as a salesman for service and supply, you weren't a geophysicist.

AB: That's right. I was an associate member. And at those times, they allowed us in, we were part of it. In fact, I worked on many committees on the CSEG and I was a member of the SEG too, for many years. When I was Chairman at the Banff Springs, now this is a big tournament, this is 400 people come to this. And at that time all the help in the Banff Springs went on strike. And we had cocktail parties and dinners every night. My poor wife, she just thought it was just going to be awful. She hid silverware and plates, in fact there was a big grand piano and she hid all this stuff in this grand piano. All the women would come up, Mrs. Rozsa was probably the leader and she would come up to me and she said, Art, don't you worry, if we have to serve ourselves, we ladies will be in that kitchen and we'll serve. And I said, well thank you very much and they. . .the supervisors and all that did a good job and we bought a lot of wine to keep everybody happy. Things were a little bit slow and we were going to have a sing-song. And the big grand piano was

out there and these people started moving it, picking it up to move it and my wife said, don't let anybody touch that piano and I said, why and she said, don't let anybody touch that piano. And I said, for christ's sake, we've got to have something, I'm a little bit nervous, we've got to have something to do because this is slow. And she said, well goddamn, it's full of silverware and plates. Anyway we got through it and it turned out to be successful and everything like that.

#209 DF: So when did you get out of the industry?

AB: Two years ago.

DF: So you retired in '98.

AB: Yes. May of '98. No, wait a minute, May of '97.

DF: '97. So from the 70's to the 90's you were working for what company.

AB: Okay, I'm sorry. I became President of Geo Space, Canada.

DF: What year did you become President?

AB: Let me just kind of. . . I was President of Mark Products from 1982, so from about '76-'82 I was President of Geo Space.

DF: Okay, and what's Mark Products?

AB: It's a competitor. It's a geophone and cable manufacturer. We had a big manufacturing plant up here in Calgary.

DF: And that was from 1982. . . .

AB: Yes, July 1st, 1982.

DF: 1982 till '97.

AB: Yes.

#224 DF: Did you supply the cable that had the geophones built right into them for marine work?

AB: Our company in Houston did. We didn't up here because there's not much marine work goes on here and we didn't have the capabilities to do that up here.

DF: Well, Marty Dewis did some marine work on the Mackenzie River. Did you have anything to do with that?

AB: Now that was with Accurate Geophysical.

DF: You didn't sell cable to him or to anybody else of that company?

AB: At that time, when Accurate was in business I was with SIE and the beginning of Geo Space. That's how long ago that was and gee, I can't remember. We probably did. Because they used what they call pressure phones and they were just kind of molded and taped on to those cables. And I'm sure we probably did do that.

#235 DF: Okay, well now that we've gone through sort of, in detail, what you did, anything else in this book?

AB: Just scuba diving, playing golf. I was down in Arizona with . . .one of these cactus. . . being a real greenhorn, I don't know cactus and I'd go around looking at them and I went too close to this and this is one of those Jumping Jahoja's and the son-of-a gun got me right in the stomach. And I'll tell you the barbs in them are curved like this, like a fish hook and they have little barbs on the end and it went in there and I had a hell of a time

getting them out.

DF: So what do you mean you got too close to it?

AB: Well, I just kind of brushed close to it and those things, they seem to be like a magnet and they got me like this.

DF: Golf can be painful, it says.

AB: And that's my boat and. . . .

#246 DF: Okay. Now just sit back for a minute. I've got about 10-15 minutes left on the tape. I'd like you to just. . . let's see we've gone through all these things. . . what did you like most about being involved in this industry? What stands out in your mind?

AB: I guess the biggest thing that stands out in my mind is the people that I was acquainted with all of my career. They're just a great bunch of people, men and women. They were adventurers, they were intellectuals and nobody flaunted anything. I can't think of one person that I can sit right down and say, I hated that person or I hated this industry. There were times like in Alaska or the Arctic that you wondered, what the hell am I doing here and why am I working 24 hours a day and freezing my butt off, but in the end you were trying to do something nobody else had done or trying to introduce something that you thought was important. There were times that were hard and you worked hard at it but there were good times. I would say people.

#264 DF: Any characters, any stories you'd like to tell?

AB: There was lots of characters. There was a fellow that was in our industry, he's dead now. He did a lot of this type of thing. . . he made safety posters for Explosives Ltd. He was an artist and they called him Chief, Chief Edwards, you've probably heard.

DF: Oh yes, tell me all you know about him.

AB: When I left SIE, I introduced Chief to selling, I trained him for selling, he took my job.

DF: You did eh? Okay where did he come from?

AB: Calgary.

DF: He was native wasn't he?

AB: No. He let on he was but he wasn't. He was a good caricature drawer. He drew up this kind of thing. If you took away a lot of the. . . if you just looked at the picture. . . he was well acquainted, he used to have a drill.

DF: He did eh?

AB: Yes, he had a drill, an old, I think it was a Smith. He never worked very hard. You could always find him, even when I was training him, he'd disappear and they'd say, oh, I seen him down in the gully by a creek drawing pictures and that's where he would be, bless his heart.

#283 DF: So did he work on seismic crews?

AB: Yes he did. As I say, he had a seismic drill and I don't know if he ever was in the field or anything like that. I think he started as a drill helper and then bought a drill.

DF: Now how old was he compared to you, younger than you, older than you?

AB: Oh no, he was older than I was. I don't know how old. Chief was one of those kind of guys that you couldn't tell his age. He's like an Indian, he just looked like an Indian, he was a tall skinny guy and he just loved to draw and that's all it was. He was a kind of an artist. Drink and draw, that was his two things he loved to do.

DF: What else can you tell me about him, when he worked for you or when you trained him? Was he a good salesman?

AB: No he wasn't because he loved to go out in the bush and draw pictures. He didn't like to work too much. Chief liked to drink and of course, part of this job you're with people all the time, taking them to suppers and lunches and meetings as they come into town. So you had to really watch your drinking and Chief would get carried away. I think that was eventually killed him.

DF: Do you know how long he's been gone?

AB: I think Chief died between '75 and '80, I just really can't remember.

#305 DF: I'd like to take pictures of these when we're done. Let's do that after the tape's off. What parts of your career really stand out for you, what are you most proud of, of the things you did?

AB: I guess introducing these new machines. When I introduced them, usually I had to work on them. I had to design most of the improvements on them and work at improving them and make them work. That took a lot of effort and I was very proud of when we did finally get them working, it wasn't always by myself, I had lots of help.

DF: what kinds of improvements, in addition to winterizing them?

AB: That was just about it or trying a different part on it or something like that. There was always problems with different things. When I was with Geo Space I introduced another drill, which we haven't talked about called a Sidewinder. And the Sidewinder was an idea that a fellow up in Rimbey came up with, a young farm boy. What it was, was a drill that was mounted on a truck sideways and you could expand it out into a ditch, leaving the truck on the road. And this thing would come out over the ditch and you could drill in five feet of water and still stay dry. You could lift it up.

#327 DF: So it would go how far off from the side of the truck?

AB: It would go out 17 feet.

DF: And then down.

AB: You could lower a platform down or a roller down so that it was stable and then you drilled from that platform. That I was pretty proud of. I should have brought some pictures of that. I was really proud of that drill. That became. . .it was a specialty drill, it had promise again and then flopped on the side because it was too slow. People wanted their 4,000' per day and you couldn't get it with a drill like that. It had interest from Shell in Holland to use it in areas where Holland is all canals and creeks and irrigation ditches and they had a big interest in it. But it never flew, I sold about 28 of them, that was about it. And we manufactured that right in Calgary. That was all done in Calgary, that was an accomplishment that I was proud of.

#342 DF: Any other inventions?

AB: No.

DF: When helicopters came in did you have to make your equipment so that it could break apart or make it lighter or anything like that?

AB: No. We never did go into anything like that. The only thing we did on that was the Dinoseis and that was it. When the helicopter came into being in our industry, then the drill contractors really got into it and people like Bertram Drilling built their own portable drills. But they were experts in it and they just kept improving and improving bu usage. Most of the things in our industry, other than the electronic instruments are built by people that. . . a lot of them have no education whatsoever and ti was just through. . . well, they were smart, they had to go to work and they learned by experience and they just kept improving. Like George Bertram, I think he's got a grade 4 education. He came out to Calgary from P.E.I., he washed dishes when he first arrived in Calgary and got a job and today he's a multi-millionaire.

DF: Still alive.

AB: Oh yes. He's one of the best guys in the world. He lives in Carbon, Alberta. He's one guy you should interview.

#362 DF: Any regrets?

AB: None whatsoever.

DF: Other than being in Alaska.

AB: Yes. The Arctic. . . . actually it was an experience and I think everybody in this world should experience the Arctic in the winter and in the summertime just to see what it is. It's a contrast, it's different, it's wild, it's beautiful and it's one of those things people should see. It's a hell of a place to work and to get around in and to have to work and. . .

DF: Where all did you go up there?

AB: I was on the Brooks Range in Alaska, up on the Anderson Plain on the Canadian Arctic. I have flown into some of the islands off of the mainland in the Arctic, Melville and Victoria Islands. And that's about it.

DF: And what were you doing there?

AB: That would be Dinoseis, except on the islands and I was just visiting, just going in on the plane to visit. Places like Inuvik were great places to visit and see. And those were fairly early days when things were really going. There were lots of incidents. . . in boom times you would have places. . . . Like, when we were with Frontier, we went into Rimbey, Alberta. There were 22 crews in Rimbey. There was probably, maybe 50 girls and we were young and single and chasing girls all the time. And of course, you have all these men going into a town like that, well trying to find a place to live was. . . we couldn't afford a hotel so we had to live in boarding houses and stuff like that. And it was tough to do so we would scheme and do everything we could to try and get in, especially in a house that had a young girl in it. We'd go to church on Sunday hoping that the mothers would see us. We'd go to church for a Sunday or two and then we'd find out where people lived and then we'd knock on their doors and ask them if we could get a room in their place and pay them board and room. And when they saw these nice young guys who were going church going they usually let us in. Things like this. There were all sorts of

things.

#402 DF: Scoundrels weren't you?

AB: Yes.

DF: We're almost out of tape here but can you tell me, when you came in here, you saw Heather and she said something about you working for the CSEG.

AB: Well, I was Business Manager. As I said, we worked on many committees of the CSEG and at the time I met Heather I was Business Manager, I was elected to Business Manager on the CSEG committee.

DF: And what did that involve and what year was that?

AB: I can't tell you.

DF: Late 80's.

AB: No, not late 80's. Early 80's, very early 80's.

DF: So that meant you ran the office, oversaw the office operations?

AB: Yes. Attended all the meetings and handled the money.

DF: This was in addition to your own job?

AB: Oh yes. All committee appointments are in addition to your own job. You volunteered for these things. I was on the first Directory Committee and later on, on a different Directory Committee and on the SEG Convention Committee and stuff like that. This is the thing, in our doodle-bug business, there were great people you worked with and you were always involved in something. It was fun. The Doodle-bug Committee, I was on that for 6 years and it was just great. That's all volunteer type of stuff. It's just great people and great times. You never thought it was work, it was kind of a lot of fun. You did things that you like doing. And one thing about this business, when things were slow, you went golfing. What better time to go out with a customer and spend 4 or 5 hours or maybe 6 hours and get to know them real well. And usually they were all good friends anyway.

#437 DF: During the downturns did you ever have any periods of unemployment?

AB: Never. I never was unemployed.

DF: What did you do during the downturns?

AB: Tried to find business, fixed up things, painted. We did everything. I never lost a job in down times. And I only worked for 3 companies, in the supply end of it, SIE, Geo Space and Mark.

DF: These geophysical companies are notorious for going under, they overbilled in good times and then they go under. All that equipment would flood the market wouldn't it?

AB: No it didn't. Because most of it they didn't own. Like geophones and stuff. . .the cables they owned. Cables, usually by the time the down turn came were starting to wear out so they were junk anyway.

DF: How long did a cable last?

AB: 3 years is about the limit on a cable. Geophones were rented. Most everybody, in that time, the only time people started really buying geophones is when 3-D came in. And there were so many of them and they were working winter and summer. We used to work year round when I first started. The only time you had down was when road ban came and

you couldn't travel the roads. So at that time we'd come into town, take some time off and then get ready, paint all the equipment, get it ready to go back out and then we'd head out, whether it was to Saskatchewan or parts of Alberta. And in the early times, we had down times but not many companies went bankrupt. They were smaller, they didn't have the investment, they didn't borrow. It was later on, as technology increased, like today, when you have companies that are spending millions on instruments, that's when they borrow. The 80's were bad, money was easy to come by, they were busy as hell in the beginning, interest rates were really high. People went overboard and that's when we started losing companies.

#474 DF: And how did that affect your business?

AB: We had lots of debt that we had to write off. Lots of debt. I'm not going to name any companies but. . .

DF: You couldn't take the equipment back and sell it again.

AB: No, you never could. There was too many people that were standing in line and usually it was the bank that number one. So you just couldn't. So you just kind of smiled and wrote it off.

DF: Did your companies lose money some years?

AB: No. Never lost money until. . .the only time I can remember is just before I retired, we had some bad years. We were right, maybe just on the verge of losing but never, I don't think any company that I was with that we were ever really in the red. Always managed to squeak by, that was the name of the game. But you always had a Board of Directors or Managers from Houston looking down your throat, screaming at you, trying to make you become an accountant.

DF: Well, Mr. Baptie, it's been so much fun spending time with you. And on behalf of the CSEG and the Petroleum Industry Oral History Project, I'd like to thank you so much for doing this with me today and we'll end the formal part of the interview at this time.

AB: Thank you very much David.