

PETROLEUM INDUSTRY ORAL HISTORY PROJECT  
TRANSCRIPT

INTERVIEWEE: Ed Tovell

INTERVIEWER: Susan Birley

DATE: March 1984

SB: It's March 28<sup>th</sup>, 1984, Susan Birley interviewing Ed Tovell in his office in Calgary. I wonder if you could first tell us when and where you were born and raised?

ET: Yes, I was born in London, England on February 19<sup>th</sup>, 1919 and came to Canada at a very young age, about 3 ½ to be exact. Spent most of my school days in Red Deer and Calgary and graduated from Western Canada High School in Calgary. Started work with the old Gas & Oil Products which is A. H. Mayland and Associates and went from there to Dow Well??? and from there sort of branched out into the field end of the oil business.

SB: I wonder if we could just look at why your parents or you decided to come to Calgary. What was the attraction there when you first moved out here?

ET: I don't really know. My father of course, was Canadian and my mother was English. I guess Father joined the CPR and of course, joining the CPR you gradually wound your way up into Calgary, which was headquarters at that time for all of the western Canada operations. He was a train engineer and a fireman whenever times got tough and they didn't need engineers, he would revert back to a fireman type of thing.

SB: I guess you saw a lot of oil industry activity when you were growing up then?

ET: Some. Most of the activity if you lived in Calgary, was Turner Valley. And although we went to Turner Valley once in awhile it was a situation where you looked out south and west every night and you saw the big glow in the sky. Of course, you thought that it was a great thing and they called it Hell's Acre or something, at that time, when we were kids that is. One thing I certainly remember is burning what we called the Turner Valley skunk gas in our Model T Fords and things of that nature, which was a gasoline, oh, it smelled horrible, that's where it got its name from. And it sold for about 10 cents a gallon, so you burned it in your cars if you could stand the smell. Of course as kids, we didn't have too much money in those days so you'd try and get yourself 4 or 5 gallons of that and you could make a trip to Cochrane or if you're lucky you might get to Banff and back and stuff like that.

SB: With the Gas & Oil Products, what was your job there?

ET: I worked for them in the Calgary warehouse as a warehouseman and then had occasion to go to Turner Valley for half a dozen trips or so and sort of got fascinated with seeing the drill rigs and some of the wells that, in those days weren't pumping but you could sort of see them flowing and things like that. 2 years later an opportunity arose to go to work for Dow Well Inc. So I left Gas & Oil Products and went with them, which was a field job directly in the oil business.

SB: With Gas & Oil Products, what size of a company was it?

ET: AT that time it was a fairly good size, it was the old Purity 99 they called it, I think some

of the old-timers would recall seeing the signs around, Purity 99 and things like that. They had some production in Turner Valley and they certainly had quite a size refinery. It was what they called the old Purity 99 refinery which was at Hartel, in south Turner Valley.

#041 SB: So when you started out with Dow Well, can you remember how you found out about the job?

ET: I don't recall just exactly how I found out about it. Some friend of mine I think, introduced me to a fellow by the name of Roy Graves, who at that time was one of their engineers and ??? and Bill McKay. I just can't recall the other fellow's name, oh, Ken Hutchinson and they asked me if I thought I'd like to go to work for them and said, oh sure. So that was it. I hired on at \$85 a month, on a training program.

SB: Was that a good wage at that time?

ET: Yes, that was in 1942 so yes, it wasn't all that bad, it was reasonably good. I think one of the reasons that I probably got hired was that I had a physical problem with one of my legs and I was 4-F. Although it didn't bother me at all, it gave me exemption from the services and if you had an exemption from the services you could go to work fairly easily into the oil business. So that may have influenced it, I don't know. But anyway, that's how that came about. I had absolutely no experience at that time.

SB: And what were your responsibilities when you started?

ET: Well, to start with I was on a 6 month training program. My first chore was to drive a half-ton pick-up with a bunch of tools down to Brooks. I didn't know what the tools were, they were just a bunch of pig iron as far as I was concerned. I drove them down there and I met this chap, Ken Hutchinson and he took the tools and assembled them altogether. He had me help a bit with the wrenches and we ran what they called a drill stem test at that time. Quite primitive by today's standards but still, I was sort of the helper and that was my first introduction to both a drilling rig and what happens in the oil business.

SB: Most of the activities of Dow Well at that time were cementing wells . . . ?

ET: Cementing and drill stem testing and acidizing. They were a completion service which performed limestone acidizing, oil well cementing and drill stem testing. We also ran all the tools for a company called Baker Oil Tools in those days. My first exposure to most all that stuff was they transferred me, within about a week, after I came back from Brooks, to Okotoks. That was their headquarters at that point of time, for all of their equipment, although they had an office in Calgary but their headquarters was Okotoks. 2 or 3 days later did several jobs in Turner Valley as a truck driver. They said you have to learn to drive a truck if you want to work for Dow Well, so I did, I learned to drive a truck. Then about 2 months later I got transferred to Taber, Alberta, which was a heavy oil field, run primarily by the old California Standard Oil Company and Imperial Oil and 2 or 3 other small independent oil companies were in the field.

SB: Were any cable tools still operating in Turner Valley at that time?

ET: Not in Turner Valley per se, but down in the Taber country, up in a place called Monarch, which was just north of Lethbridge and I think it's still there, there were 2 cable tool rigs running and if I recall there was one out at a place called Lundbreck. We, with Dow Well

had occasion to go out and see these cable tool units running and do some work for them, do some cementing and things of that nature.

- #085 SB: I guess you got to know quite a few of the drilling contractors through your job did you?
- ET: Yes, a fair amount because we were exposed to drilling people at that time. Some of them that come to mind was let's see, what runs to my mind, some of the fellows, some are still around and some aren't. With the Imperial Oil group as Esso were known in those days we had a couple of tool pushers, George Kirkpatrick and Bill Blynn. Of course, one of the geologists that I do remember is Aubrey Kerr. He was a geologist on, I think it was George Kirkpatrick's rig and they were running out just south of Taber at a place called Barnwell at that time, when I first got associated with them. Then with the California Standard group, there was a fellow by the name of Don Redman, who was their field superintendent, drilling superintendent in the area. Several drilling companies, one that runs to my mind was Newell and Chandler. They had I think, 3 rigs if I remember rightly and Delbert Lewis was their field superintendent. He's passed on now but at that time he was. And several pushers who I just can't recall their names.
- SB: Other people that you worked with on the crews, Roy Graves I guess was your supervisor was he?
- ET: Roy Graves at that time was what we called the station manager and he lived in Calgary. My immediate superior at that time was Ken Hutchinson. We had a fellow in Turner Valley by the name of Bill McKay, he was what they called a treaty engineer. There was another chap by the name of Jack McMillan, who had just come back from South America and he was about in the same status as myself, he was learning the circulating business. He and I worked pretty well for Ken Hutchinson. There were only the 3 of us at that time down there.
- SB: How about Pete Atkinson and Jim Wederburn???, were they. . .?
- ET: Bill Wederburn. They came later. Bill Wederburn came after the war was over, he was overseas as a flying instructor. And Bill came back and came to work for us and Pete Atkinson about the same time as the Leduc discovery, and that was in 1947 when Pete came with us. It may have been late '46 or '47.
- SB: Had the cementing technology developed very much then or was it. . .?
- ET: Yes, it certainly had. Our competitor of course, was Haliburton Oilwell Cementing Company, which was a very, very large and very successful cementing company. And ourselves, and I would like to think that with Dow we came up with a lot of good innovations to make cementing easier and to make it more successful on cement jobs and stuff like that, yes.
- SB: With each field did you have to develop new combinations?
- ET: New techniques, yes. You did. A lot depended on what the formations were like. Some of the formations had a lot of water underlying the oil and/or gas and it required some special techniques to clean the bore hole off so that you got a good bond between the casing and the cement, and the formation, yes. We developed some techniques as early as those days that they still use today.

#132 SB: Could you just mention them briefly?

ET: Most of them I would think, for people who are knowledgeable about what oilwell cementing is, was to reciprocating the pipe for a fairly lengthy time before cementing and a pre-cementing pill, fresh water with some chemical in it was developed. Reciprocating the pipe while cementing and things of that nature. But basically the same process is used today as was then, they haven't changed it that much. The basics haven't changed.

SB: Has the composition of the cement changed that much?

ET: Yes, it has. They have of course, put additives into the cement to lighten it up and they make it so that it doesn't shrink as much when it sets and things of that nature. Yes, there's quite a bit of work done on the chemical side of cementing. But the mechanical side hasn't changed very much.

SB: Was there very much sort of open rivalry with Haliburton or did you just . . . ?

ET: There was open rivalry but it was very, very friendly. We used to have, I'd like to say a very good rapport with most of their engineers like ourselves. As a matter of fact, in the Turner Valley area it used to be quite a thing, jobs as you can appreciate were fairly scarce, and if you got a job from one of the oil companies it was considered a coup and a real good thing. So we would proceed to drive our trucks by the Haliburton yard, which was in Black Diamond, to make sure that they saw us going towards Turner Valley and try and disrupt some of their thinking, wondering where we were going. Of course, several times we'd just drive our trucks by there even if we weren't going anywhere, just for fun and create a little bit of a problem for some of their sales people. And they did the same to us.

SB: You mentioned Leduc. Were you ever involved in Atlantic 3 or were you still working for Dow Well at the time?

ET: Oh yes, I was involved a fair amount with the Atlantic 3 well as a matter of fact. Of course, they discovered Leduc in 1947, February 2<sup>nd</sup> if I remember rightly, the exact date. I myself, was stationed in Lloydminster at that time and I came over from Lloydminster to cement the long stream in for Imperial Oil on the Leduc discovery, Leduc #1. Then when the Atlantic well broke loose they required some, shall I call it expertise, on how we could pump fluids from a relief well over into the well that was blowing out and things like that. I worked fairly closely with Tip Maroney, who was with the Imperial Oil group at that time, and Charlie Visser who was also one of the drilling superintendents. And several of their tool pushers and stuff like that.

#170 SB: Do you remember any of the details about how many sacks of cement . . . ?

ET: No, I don't recall too much of that. I recall one of the days when we had drilled the west relief, which was the relief well drilled to the west of the blow-out. The west relief well was down to where they thought it was almost ready to intersect the bore hole of the blow-out well of Atlantic 3 and we set out there for 5 days with 3 pump trucks, pumping fluid into the west relief well hoping that it would flow over into the blow-out. It didn't of course, so they had to drill some more hole. Eventually we did intersect the formation that the Atlantic was blowing out from. In the meantime they had built a couple of 7" lines from the river, with some pumps down on the river. We threw some acid into the well

and cleaned the formation up and then they turned these big pumps on and within a matter of hours, why, they had the well killed. Then it created quite a problem with the south relief well because about that time it was drilling into it. The reason it had 2 wells was they were drilling with steam in those days, because they couldn't take a chance with their engines and they had their boilers well off to one side and then ran steam lines. And if the wind changed and blew over wherever the boilers were they'd stop that rig from drilling and drill on one of the others you see, type of thing.

SB: Do you remember who the tool pushes were at that time?

ET: Tom Warrick was the tool pusher on General Petroleum's west relief. Bob Brownbridge I think, was one of the pushes, I don't know whether he was the pusher on south relief. That's all I remember any more.

SB: Did you work in Saskatchewan at all while you were working with Dow Well?

ET: Yes. I was never stationed in Saskatchewan but we used to spend a lot of time over there because Imperial Oil, they had about 3 or 4 drilling rigs wildcatting in Saskatchewan. Yes, we did some work south of Moose Jaw and north of Regina, up in the Riverhurst area. As a matter of fact, ironically, the well that Vern Hunter, the last well they drilled in Saskatchewan was at Davidson, Saskatchewan. Then Vern Hunter, with his Imperial Oil rig, moved to Provost and he drilled about 3 wells in Provost and then moved from Provost to the Imperial Oil #1 discovery well.

SB: I was wondering if you ran across Cam Sproule in that early time?

ET: Yes, I sure did, with Cam Sproule down in the Moose Jaw area, south of Moose Jaw. On some of those wells. Cam was a geologist for Imperial Oil at the time and I might add a very good one and just an awful nice fellow to sit down and chat with. Because most of us weren't geologists and he would always take the time to sit down and try to point out to you what they were looking for and what the samples meant and things like that. As a matter of fact, every once in awhile we would pull a bit of a dirty trick on him, we would get some egg shells and grind them up and make sure that they got in the samples. Of course, one of their tests always for limestone was to use some muretic??? acid or hydrochloric acid. And it would react on any calcium carbonate. And of course, egg shells are calcium carbonates, so it would react and it would be in the middle of a shale section and it would throw the geologists for a loop because they didn't know how on earth you got limestone in the middle of a shale section. So the egg shells were the answer.

#222 SB: So they'd eventually figure it out.

ET: Oh yes, he found out about it. Of course, we were ostracized for a little while.

SB: So how long did you stay with Dow?

ET: I was with Dow until 1950, from 1942, 8 years.

SB: Was there any reason you decided you didn't want to stay with them anymore?

ET: The basic reason I suppose was I had seen just about everything you could do with a service company and I, at that time, would have liked to have gone to work for an oil company. A couple of friends of mine who were working with oil companies had suggested that if I were to be available, they would use some of my services on a consulting basis. So that sort of influenced me as to why I would leave Dow Well. So I

did and started up a consulting practice, which I did for about, I guess probably around a year. And then another good friend of mine, Charlie Dunkerley, who was a junior engineer when I was in the Taber area, he had just come to work for California Standard people, we had done a lot of work together on some of their wells. He had gone with Dome Petroleum as their chief engineer and he asked me if I would consider coming to work for them. Which I did that year, I went with them as their field superintendent, in charge of drilling and production.

SB: I was wondering if you worked with Bill Maynard of Sweetgrass Oils during that time?

ET: I didn't work with Bill but I knew Bill very, very well. I worked as a consultant on a well that Bill Maynard was drilling down in the Lethbridge area. We got to know Bill and his wife very well, my wife and I did. They were drilling the well that was offsetting the one that I was looking after. I had no interest in it or anything of that nature, I was just purely a consulting engineer and Bill and I got to be very good friends. But our paths didn't cross too awfully much. When I was with Dome he was still with Sweetgrass but we didn't drill any joint wells with them or anything of that nature. I don't know where Bill is now.

SB: With the Dome operation, can you remember some of the things that you were involved with in the beginning, when you first started with them?

ET: Yes, I guess. I stepped into all of their operations at the time. I think we only had, if I remember rightly, 2 drilling rigs running. One was out in what is now the Provost field and the other was up on the Alaska Highway, at Mile 168, which we called the Bucking Horse area. Of course, in those days the Alaska Highway was different than it is today. You can fly up there now and everything you want but in those days you flew up there to Dawson Creek in an old DC-3 and you would get yourself a car or a truck and you drove from there on up the highway, because there were no airplanes or anything of that nature. We were 21 miles off the highway. We got the well finished. It took roughly 9 months to finish the well to a depth that now they do in about 2 weeks. But that was because of the techniques, we just didn't have the techniques that they have today.

#274 SB: Did you have your own rigs at that time?

ET: No, Dome never at any time had their own rigs, we always used contractors.

SB: Who was the contractor . . . ?

ET: On that particular rig it was the old Noble Drilling Company. They're not around anymore but they were a U.S. outfit, up from Dallas, Texas. They had 4 rigs in here at the time but most of them were up on the Alaska Highway.

SB: In Provost who was your contractor?

ET: The contractor out there was Ray Tulle owned it, oh, ??? Drilling. Ray and Pete Tulle were running it at that time. They drilled the first 3 wells for us out there.

SB: Was one of those a discovery well?

ET: No, it wasn't quite a discovery. The original discovery wells were made by Vern Hunter as I referred to, back when he came over from Davidson. Imperial Oil had drilled, I think 2 or possibly 3 discovery wells in the area. We had, through a subsidiary company called Provo Gas Producers, taken a farm out from Imperial Oil. We were drilling offsets, or

step-outs, call them what you want, from these 3 discovery wells. So we drilled 3 wells offsetting it and proved up that there was, yes, quite a bit of gas there. And went from there to a gas plant and selling gas.

SB: And you didn't have any shows of anything in the B.C. wells did you?

ET: No, the B.C. well was abandoned, that's right.

SB: Were you involved in the Drumheller drilling, any of the wells around there?

ET: I wasn't personally. Dome Petroleum, via a company called Naaco??? Petroleums, who they took over, we wound up with 3 or 4 wells in the Drumheller area. 3 of them, I guess it was about 5 wells altogether, 3 of them were oil wells and a couple of them were gassy oil wells. We produced the oil wells for 5 or 6 years and then it was unitized, so then we didn't operate anymore. It went over to Great Plains, they became the operator.

#310 SB: And you were field superintendent did you say when you first started?

ET: Yes.

SB: So what was your area of responsibility?

ET: AT that time all the drilling and all the production in Dome Petroleum, period. Most of it of course, was in Alberta. We had nothing in Saskatchewan to start with and nothing in B.C. We gradually worked out way into those different places. 1954 we made a decision to go into Manitoba and into Saskatchewan. So we drilled a couple of wildcat wells, one in Midale, which turned out to be successful. And got a couple of them in Virden. So suddenly, almost overnight, we were in production in Saskatchewan and Manitoba for that matter. With one well in Midale which very rapidly became quite a field. I can recall quite vividly in those days, Shell Oil Company were in there, and Husky were the only other producers in the area and we had to truck our oil into Midale and then load it into tank cars. Then it was shipped down to eastern refineries you see. We were able to, our management massaged some sort of a deal with one of the refineries down there that if we could guarantee them 3 or 4 tank cars a week of crude oil, they'd buy it all. It was at a reduced price but it meant that we shut the wells in if we couldn't do something of that nature. So due to my father's connections with the CPR I was able to go to Regina and I talked to the CPR superintendent and made arrangements for a siding at a place called Halbright. So he came down one day in his fancy car, superintendents for CPR always had their own car, they put it on the back of a train. So I arranged to meet the old boy, Howard Cowey was his name, I remember it very vividly, and he made arrangements for us to have room for 4 tank cars on a siding at Halbright. And one switch per day on a freight train, there was like a little local freight train that was always going by there, that he would switch our cars once a day. So we went back and signed the contract with this refinery and then had to build a big loading rack at Halbright. So that our trucks, all they had to do was back in, tie into the loading rack and load the cars out. So with this contact and with our ability to ship oil very quickly we drilled at that point in time, about 10 more wells.

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## Tape 1 Side 2

ET: So of course, with our ability to sell this production, we were able to then drill these offset wells so we lined up our well right offsetting Shell Oil Company. Shell of course, being a large company, weren't able to make a snap decision like we were. No reflection on Shell but they just weren't able to. We were able to outsell them and of course, out pump them because it meant that they would have to offset us and start taking oil, otherwise create what we call a pressure sump and we would probably wind up with a little more oil out of the pool than what we were entitled to. But that was the old law of capture and demand. That if you could get the oil and sell it, why you did it. And of course, those same rules still apply today, although they are controlled more by the Conservation Boards than they were then. So that was one effort that helped to make Dome because we were able to sell oil when nobody else could and that meant cash flow and all that goes along with it.

SB: I guess that was another advantage of Dome, that you had a very small group that were working on everything and so. . .

ET: At that point in time, that was a definite advantage. Yes, you were able to make a decision like that, without having to go too far up. In my case there were only 2 people that I worked for, Mr. Dunkerley and Mr. Gallagher. And we were a pretty close knit team at that time, I would suggest there were only about 11 of us working for the company then. When I started with them there were 6 of us and 3 of those were secretaries.

SB: Were you involved in the Redwater acreage at the time that you got involved?

ET: Yes I was. Because Dome at that time, had bought the acreage several years before that. I think in about 1949. They had formed Dome Exploration Western Ltd. as it was called in those days. They were operated by Western Leaseholds. Dome at that time had no employees of their own. It was operated by them and they bought and drilled the Redwater acreage. Then Mr. Gallagher came with the company, I think in 1950 or late '49 or '50, somewhere in there, and then Mr. Dunkerley came in late 1950 and then I came on board, I think it was '51 or early '52, right in there. But we already had the Redwater acreage, that's right. So we did several work overs. A lot of those wells had turned to water in those days. We were looking at a high volume pumping situation where you would run what they call a Rita pump and pump tremendously high volumes of fluid. Perhaps in the order of 3 or 4 hundred barrels a day. Most of it would be water but you would salvage 40 or 50 barrels of oil from the operation and sell the oil and pump the water into a disposal system and let it go at that. We were in the process of looking into this and almost perfecting it when the Sinclair Oil Company came along. They had done a lot of this in the United States and they were very, very enthusiastic after we showed them what we were doing so they bought us out. They bought out the Redwater acreage. I recall that one very vividly because we owed debt at that time in Dome, of \$3.5 million and they paid us \$6.7 million for the Redwater acreage. We were able to retire our debt and we wound up with about \$2.5 million extra. But the 3 of us, Mr. Gallagher and Dunkerley

and myself were present when they gave us a cheque, one for the bank and another for us. We took a look at this, with all those zeros, it looked pretty nice. But with that money we were able to then go into the Boundary Lake area, which was in B.C.

#049 SB: And that proved to be a good ??? area?

ET: Oh yes. Boundary Lake was a major discovery. As a matter of fact, the field is still producing a fair amount of oil

SB: So compared to other companies that started around the same time, you were in a very good cash flow position.

ET: Yes, then we were. Today it wouldn't be considered anything. But in those days, you know, because you could drill a well for \$100,000 then which would cost you, crowding a million dollars today. There's quite a difference in the amount that you paid for your wells.

SB: About what time did Dome consider going into the Arctic, was it always . . . ?

ET: In about 1959 I think there was a tremendous amount of acreage came up for sale. I think it was about the time the Conservative government got in, they were in for a very brief period there. They put a lot of this acreage up for sale and if you did geology on it or did some surface geology and some aerial photographing you earned credits and of course, the credits went towards your rentals. So Dome, on Melville Island, it took out a fairly healthy drilling reservation. We did a lot of aerial reconnaissance and some surface geology. As a matter of fact, at that time, Cam Sproule was in the area with a team of consulting geologists. We renewed old acquaintances, he and I, and they did a lot of the original surface geology for us and some of the aerial photography.

SB: So you both went up there independently?

ET: Oh yes. Dr. Sproule was up there, we used to call him Doc, he was up there with this party of consultants that he had, doing geological work for anybody, anyone that wanted to hire his services.

SB: Ed Baltrisitus had hired on at that time?

ET: Ed Baltrisitus at that time, was our geophysical manager, superintendent. He had come to work for us roughly about a year before. He had a lot of faith in the Arctic and also in the Zama Lake area, what later became quite a field. Ed put us into that and he put us into the Arctic Islands. Of course, some of his enthusiasm rubbed off on Jack Gallagher. From then on as far as Mr. Gallagher was concerned, the Arctic was it. He himself was a geologist and so was Ed, I guess Ed was a geophysicist I'm sorry. Between the 2 of them they were very, very enthusiastic. Jack as a geologist, felt that there were some tremendous structures up there and Ed, as a geophysicist, could visualise some structures. If he had some seismic in there he could probably pin them down.

SB: How about some of the other people that were hired, such as Don Wolcott?

ET: Don didn't come on, Don Wolcott came with us in the early 50's but Don was a gas engineer. He came from the Gulf Oil Corporation and his long suit was gas production and gas processing. Don probably would have been, how will I put it, perhaps more of a process engineer. When Don came with us we developed the Provost gas field which I referred to earlier. We had then made a deal with the Provo Gas Producers, to manage their affairs and we owned a fair amount of stock in it. So Don Wolcott was hired at that

time. He was the original design engineer for the Consort Gas Plant, which is still there.

#091 SB: How about Bill Richards, had he been hired at that time?

ET: Bill came about the same time I think. Bill came to us as a lawyer, Bill's background is he's a legal man and he came to us in our legal department. He was looking after the legal documents and some of the land records and stuff of that nature. But he had a lot of things on the ball so he progressed very, very rapidly up to a Vice-President and then he went from there to President. He was President the last year I was there, previous to that he was Vice-President.

SB: And Maurice Strong?

ET: Maurice Strong wasn't with us very long. I first met Maurice in 1955 I think it was, when he came back from overseas. Maurice Strong had done some work for Dome before he went overseas, he went over to Kenya, someplace over there with the YMCA people. Previous to that he had gone to Saskatchewan and did a lot of land work for us that got these leases and what have you from the farmers and stuff of that nature. I didn't know him of course, then. Then he went overseas and he came back and he was looking for a job so Jack, who knew him brought him into our land department. He looked after our land for, I don't recall the exact amount of time but it was about 3 years, perhaps 4. Then he elected to leave and he went with the power corporation. About that time Bill Richards kind of jumped into that slot and moved on up in the company.

SB: So by the end of the 1950's Dome's position was pretty good as far as land went?

ET: We always had a good land picture. Certainly in Saskatchewan we had all these huge acreages that had been taken over. You perhaps recall some of the lawsuits where farmers had sold their land rights for 10 cents and they were trying to get them back and everything. Dome was part and parcel of that, Dome and several other companies, what's now Mobil Oil, Seccony Vacuum in those days, they were part of it too. And Shell.

SB: So that was probably one reason why you needed a legal person on staff was it?

ET: Oh, I think you need one anyway. If you get to a certain size you've got to have one. We found that trying to get outside legal people to do anything, it was almost impossible. So we set up our own legal department and Bill Richards headed the legal department.

SB: So when you decided to go into the Arctic, did you initially have problems getting regulations passed and things like that?

ET: Not on the islands. The islands were pretty good. We could drill down here and we had all the necessary blow out preventors systems and the drilling systems and stuff like that. To go to the Arctic Island was only a matter of going to Ottawa and saying, we want to drill in the Arctic and they'd say, where do you want to drill. Because in those days nobody even knew where the Arctic Islands were, let alone where you wanted to drill. So we had made the decision that yes, we were going to drill a well in the Arctic Islands and so, we contacted Sproule and Associates and they did some of our preliminary work for us, like some surface geology and a little bit of aerial photography and things of that nature. Our geological department decided where we were going to drill. That happened to be picked for several reasons. #1 was you can imagine the logistics in those days, it was virtually impossible to even get to the Arctic, let alone to get a drilling rig in there. It

was a day and a half's flight there from here on DC-3 to get up there and what have you. So because we felt, from reading books, and Ed Baltritisus was very instrumental in this, he was a bit of a historian anyway and he got every book that you could find on Arctic travel. Like Perry and all those old Arctic explorers. And a lot of them wrote books on it and they were in the archives in Ottawa. So we got those and we found out that Winterharbour had been used by Vice Admiral Perry or somebody who was an English Vice Admiral, had wintered in Winterharbour and he'd survived and he'd been able to float his ships in there in late fall and everything like that. We decided if he could do it we could do it, with modern ships and stuff like that. That's why the location of Winterharbour was picked. More from that reason than any geology. So we decided to go ahead with the project and we contacted Peter Bawden Drilling. Peter at that time had done a lot of work for Dome, he'd done a lot of good work. But he was a bit of an enthusiast, he wanted to get some publicity and get on something that was different. So we drafted a contract and they got together from there.

#154 SB: Was Peter Bawden responsible for arranging the movement of equipment on to the site or things like that?

ET: No, his responsibility was to give us a contract price to do this particular job and to make a rig available. Although he did a lot of the logistics for us it was done on our behalf. #1 we had to get the rig from wherever it was. I think if I remember rightly it was in northern Alberta. He took it to his yard in Edmonton and we got together at meetings and decided what we needed for a rig up there. In other words, how do you winterize it. None of us knew what the Arctic winters were like. We knew that they were 24 hrs. a day of darkness and that it got darn cold. But none of us knew what you needed. But we did recognize that you had to house the rig in and keep things from just deteriorating and freezing up, and then what have you got, nothing. He did design, via some camp people, an Arctic camp, which was the all-in-one concept. You went in one door and you stayed in the camp until you left it at the other side. Whereas previous to that here, you'd have a building and then you'd have a space and then another building and a space, with outside set-up you see. So there camp was all one. But it was designed after an Air Force complex which was at Resolute Bay. They had found out long ago up there that in the Arctic you've got to go indoors and stay there. The only time you come out is when you have to because of the extreme cold and it's dark. So we worked the rig around those concepts and rigged it up to where the boiler supplied the heat for everything. But it was in a house right close to the rig so that you had no heat loss and things of that nature. Peter did most of that work because he had people on staff that could do it. We really and truly didn't at that time. When it came to the actual movement of the rig it was shipped by rail to Montreal and it was loaded on a ship in Montreal and then the ship sailed from there up to Resolute Bay and then from Resolute Bay to Winterharbour. I myself personally joined the ship at Resolute Bay. I sent some of our people to Montreal to load the thing out then I joined the thing at Resolute Bay.

SB: How about getting a crew, was there any difficulty finding a crew?

ET: At that time, no, we had no difficulty. Because everybody wanted to go to the Arctic, it

was a brand new adventure and things of that nature. So everyone wanted to go there. So I went up to Resolute Bay myself personally. Of course, who do I meet when I get off the airplane is Cam Sproule. He's sitting in there, he'd been doing a lot of geology around. So we had old home week type of thing. He was very, very instrumental in showing me a lot of the ropes up there because he'd been there for 3 years before that. He himself was a field man at heart and he just knew as much about the Arctic as anybody at that point in time. So anyway we had some very nice long conversations in the evening on this and that and how you handled yourself in the Arctic. So then we went from there to Winterharbour with the ship and unloaded the rig and set it up and drilled the well.

#201 SB: What was the target when you were drilling?

ET: The target, we had targeted only a depth because we really didn't know what kind of formations we were going to run into because no one had drilled up there. Outcroppings and what have you were of a very recent nature, most of them were shales. Very, very little structure indicated in the creeks and the rivers. So we had set a depth of about 10,000'. We felt that if we got that deep that something would show up or something of that nature. It turned out that we did drill the well to 12,726' if I can remember the exact depth, that would be plus or minus 10. We drilled almost to the same formation at that depth as we drilled in to the surface. There was just a tremendous amount of shale.

SB: Were you encouraged at all by. . .?

ET: At that point in time, not particularly, no. We felt then and I think the consensus of opinion in the industry, if anyone else had acreage up there, that you must do some seismic. Because it was very evident that there were no exposed structures that you could look at. There was lots of, how will I put it, basic formations and limestones that were there because they'd never had sediments deposited on them like they have here. Now I'm not a geologist, I'm just mimicking what the geologists tell me. But still there was no structure. It was very, very hard to define continuity and structure and zones. They knew there was a reef there, they knew that there were some sands there. They didn't know the names of them. They had gone back to Resolute Bay and they'd extrapolated depths and slants but nobody knew. So it was the consensus of opinion in the industry was that some seismic had to be done. Then perhaps from the seismic you'd start picking up some of these formations that they'd thought were there but they could never prove it you see. They whole thing just sort of went in limbo at that point in time because you couldn't find people with enough money to go ahead and work in there. In the meantime there was lots of conventional oil down here, you had Zama, you had Rainbow, you had B.C. going like gung-ho, everybody was drilling in B.C. Saskatchewan you were still finding good oil down there. And in Alberta Pembina was still going and Swan Hills was running. So the Arctic was just something, yes, sure it's there and maybe someday we'll go there.

SB: Did Dome have other operations going on at the same time in western Canada?

ET: Oh yes, we had, at that time, of course, we would be drilling in all 3 western provinces. We had drilling operations going in southern Saskatchewan. I think we'd finished with Manitoba by then, we weren't that successful in Manitoba. But we had lots of work going on in Saskatchewan and a fair amount of work going on here, up in our Zama Lake area,

we had some good production there. We were working in, finished off in Pembina and we were quite strong around Fort St. John and north of Fort St. John in the Beaton River area and ??? Creek and places like that. So we had lots to do so we didn't have the personnel or anything to put into the Arctic. Since one dry hole we didn't have the get up and go, the gung-hoeness.

#253 SB: Did anyone do any seismic after that up there?

ET: No, nobody did. My understanding is that Cam Sproule worked at his surface geology for another few years and then he promoted what was to become Pan Arctic Oils. And he had several mining companies that were fairly interested but mining companies really did not know the oil business. And a budget of \$300,000 to a mining company for exploration is a lot of money. To an oil company that's just a drop in the bucket, that's only one seismic crew for a month. So really the 2 didn't meld. So Cam was always working up against the ax of trying to find some money. So anyway he got the federal government to take 49% of his company, Pan Arctic. And they would put up, I don't remember the exact amount now but I think it was \$8 million, that they would contribute if he could match it. Of course, there was his dilemma, he couldn't match it. There was no way he could get any companies to go ahead and put there money in because he was dealing with mining companies. And as I say, the oil companies were all so busy operating down here in the conventional areas that they said, yes the Arctic is there but it's there and it will always be there. So to make a long story short, the Pan Arctic thing was about to fall flat and go under. Dr. Sproule contacted our president, Jack Gallagher and the president of Canadian Pacific Oil and Gas, which was John Taylor at that time. John Taylor and Mr. Gallagher and myself, we went down to Ottawa. We had a meeting that night for dinner with Cam Sproule and some of the people from the government and ourselves and Pan Arctic was born.

SB: Who was from the government, do you remember?

ET: God, you would ask me that, I just forget now.

SB: It wouldn't have been Alvin Hamilton, would he have been one of them.

ET: I don't think it was Alvin. No, he wasn't there that night. No, this was in 1967, gosh, I'm sorry, I don't remember. But then, the next day when we went over to the government I think we then did meet Alvin Hamilton and some of his bureaucrats at that time. One of them that I recall very vividly was Digby Hunt. He was with the department of Indian Affairs, who operated the Arctic. The other one was Dr. Harry Woodward, he was our chief geologist. I had been meeting with those people because they were in operations more so than the other, than John Taylor and Mr. Gallagher. So at that point in time we said okay, we will have a good look at this thing and if we like it, by we, I mean if CPOG and Dome liked it, we were in. And if we were in then we would draw a lot of the other companies in. Because now you had some expertise you see, which is I think, what everyone was looking for. So the next day we had our own little meeting, the 3 of us in the oil company side and we said, let's go. So if we could then get the government to go along with it then everything was fine. So we had a big meeting, I recall there was about 35 people there and about 30 of them were from the government and the rest were

ourselves. It was decided at that meeting, Jack Gallagher and I had to excuse ourselves because we said that we would go along if we could operate. We felt that we could operate the thing, perhaps as good as anybody because we had the drilling expertise and we had drilled Winterharbour, some things like that. So we excused ourselves and left the room for an hour while they had their own little meeting you see. Because we can't sit there because they may want to talk about us and I'm sure they did. But anyway they called us back in the meeting, Jack and I sat out back there in one of the halls and we were talking about, what would we do if we got to be the operator of Pan Arctic. Lo and behold, they called us back in and sat us down and said, it's a go. It was that simple. So we had to shake our heads because they never asked us any questions or anything, just said go. So of course, now, it's an operations problem. Because we've got the money, we've got the operator. We had to get some agreements straightened out but that's only a formality. In those days in the oil business when you shook hands with somebody that was the end of it. Anyway, the next day I had a meeting with the operations people in the government. We set up a meeting where we would come down and tell them, a) how we're going to drill, b) the geology, c) the geophysics and the whole smear. So anyway I came back to Calgary.

End of tape.

Tape 2 Side 1

- ET: So anyway we set up a meeting where we would come down with all of our people. Prepared to give talks, speeches, of a very technical nature. We hoped that we were able to indicate to them what we were going to do and we wanted as many of the bureaucratic people as could get there because they didn't, as I mentioned before, don't even know what the Arctic is, let alone what it's all about. So we set up a meeting for 2 weeks later and went down. We had a wonderful turn out, we had people from every department in the government, key people. So that we were able to give them John Andrick was along and he gave them a real good talk on how many barrels of oil they thought they might get and all that. Ed Baltrisitus didn't come along on the trip, because I don't think he was with us at that time. I think he had probably left and gone elsewhere. But John Andrick was our chief geologist at the time. And then we had our chief geophysicist down there, yes, that's right, Ed wasn't there because we had another man there. We laid on how we would do seismic in there and how we do these air helicopter type seismic rigs, where they break down into pieces and a helicopter picks the pieces up and takes it over and the whole works. And then I give them a talk on the logistics of how all this was going to take place and what we needed in the way of supplies, what have you. And it kind of went from there.
- SB: What kind of incentives had the government given companies at that point?
- ET: Well, at that point there were no incentives that I know of. I think the usual royalties were on production, 10% or 12 or whatever the case may be. But they had given their help in the form of a 49% interest in Pan Arctic, which was \$8 million, I think 8 was the figure. And that was a fair amount of money. We had to match it mind you, with 51%, which

- was a little more than \$8 million, 8.3 or something. But that was their help at the time, because they really wanted to see something happen, there was no two ways about it.
- SB: And I guess they hadn't put very much pressure on developing your land quickly, they realized. . .
- ET: No. Because previous to that, you got your leases and I think they were good for 5 years and you could get renewals for up to 10. But you were able to hold the lease by doing this aerial photography and surface geology. And you built credits up, and with these credits, they applied against the rentals. So that you always could keep your leases as long as you continued to do something. But then along came the fact that if we drilled, could we get some super credits type of a thing, and the answer was yes. Yes, we did get that incentive, we got an incentive where if we spent a dollar, that is the Pan Arctic group spent a dollar, we'd get \$2 worth of credits against the rentals. So yes, we did get an incentive, that type of incentive. But that was no dollars out of the government pocket. Well, I guess maybe it was in a way but it had to apply against the rentals.
- #038 SB: So it was just an encouragement to stay a little longer.
- ET: Oh definitely, yes. It did because if you could get \$2 for \$1 credit for drilling, the incentive then, yes, it was too drilling more so. So I think we massaged it slightly and got some better credits for a lot of seismic too because seismic was quite expensive to do because of again, the logistics. You had to get the seismic rigs up there and everything had to be done by helicopter at the time because there were no roads. And of course, the environmentalists were starting to flex a muscle here and a muscle there. They didn't want you driving over the tundra and stuff of that nature. So anyway 1967, that's when this all took place.
- SB: And at that time I guess, had Pan Arctic officially been formed then or. . .?
- ET: Yes, it was formed. I think Cam Sproule actually formed Pan Arctic as a company. But at that time then now, the government put their money in and the oil companies put their money in and Dome Petroleum became the operator of Pan Arctic.
- SB: So how long did you stay with them then, with Pan Arctic?
- ET: I was only on loan to Pan Arctic for 2 years. And then I didn't work full time at it, I still had a bunch of duties at Dome. But we did turn over several Dome personnel to them on a full time basis, one being Neil Fluker???. Neil Fluker was an old hand of ours, a production man and a drilling man. He went in there and he looked after most of the moving of the first rig in and stuff of that nature and setting up some camps and things.
- SB: Did Dome do any other operations in the Arctic independently?
- ET: At that time, no, we were strictly Pan Arctic. Because we felt that we had a conflict of interest. Dome had a lot of acreage in there and we had to be super careful that somebody didn't come along and say, hey, you're drilling close to your land and hey, what are you doing sitting in there with all this acreage. Which we had not put into Pan Arctic, we put money in instead.
- SB: Did the seismic show anything up?
- ET: Yes, the seismic certainly did. It turned out that we moved our seismic into a place called Sherard??? Bay at that time, built an airstrip there and built a nice sort of small base camp

and did a bunch of seismic on Melville Island. The first location that was picked from seismic was Drake Point. We flew a rig in of course, to Drake Point and that was the blow-out, you've probably heard of the Drake Point blow-out.

SB: So the location was picked . . . ?

ET: From seismic oh yes. And it turned out that most of the seismic was fairly accurate. It was surprising, it began to show some good sections in there which, no way you could see them from the surface.

SB: Can you remember who the contractor was on Drake Point?

ET: Yes. We went out to bid at that time, to a consortium or individuals or anything. Several of the drilling companies all bid and it was a consortium of Commonwealth Drilling Co. and Hightower Drilling. They formed what they called the Com High Drilling Company and they were the successful bidders. So they built 2 rigs specially for the Arctic. There was another rig that Commonwealth had up there and they turned around and we remodelled that rig, flew the equipment in to remodel it. So we wound up with 3 rigs. And Peter Bawden of course, who had a rig in there but it was an older rig, he was unsuccessful in the bid so I think at that time he flew his rig out or something, we flew it out for him.

#077 SB: Could you go into the circumstances surrounding the blow-out at Drake Point?

ET: I can tell you roughly what happened. I didn't sit on the well so I don't know. You know, you'll never know what actually happened, all you know is that it did blow-out. The circumstances leading up to it I can tell you about. We had drilled the well down to about 7,000' and on the way down we had encountered several shows of gas and we had run some drill stem tests and got fairly good amounts of natural gas and what have you. But we had got down to what we thought was the objective that we were looking for, which I believe was called the Allen Lime or something of that nature. Don't ask me how that name came, I don't know. And we decided that we would cut a core. But in the meantime on the way down we'd had a lot of trouble with lost circulation in the well and we'd overcome some of those difficulties, we'd had some stuck drill pipe and what have you. Which you'll always get on wildcat wells, where you don't know what you're drilling into. I recall very vividly in my case on the well, I had taken a holiday. I had been up there on a fishing job and got the fish out and put them back to drilling again. And I went over to Seattle and I'm gone about 5 days, I went first to Vancouver and then to Seattle. I don't know why I phoned in, I phoned a friend of mine up at the airport with an airplane, I'd said I'd call him because we were negotiating for some aircraft to fly in and out of there with crews. And I phoned him to see how our negotiations and he said, Jesus, am I glad you called, they've been looking for you for 3 days, Drake Point's blown out. So goodness, I called Calgary and within 2 hours there was a jet sitting on the airstrip at Seattle and my wife and I, we were on board that thing back to Calgary. So in 5 hours we were back here and then we got the company plane and we were gone up there to the blow-out. But in the meantime I guess, what had happened, they were pulling the pipe with a core and on the way out the well blew-in. They probably lost circulation or something. And it blew-in and of course, when it blew-in it cratered pretty bad around the

rig. And although it didn't catch fire at the time, I spent about 4 days up there with Red Adair and some of his people and we felt that there was no danger of fire. But we then were working around it trying to run a packer in the hole and plug drill pipe and get this packer setting the surface pipe and get the darn thing to quit flowing. And then we'd get the rig back out of the way and get it fixed and get it back, then we could go to work on the well. We did get that done but we just couldn't seem to stop the flow. It just kept flowing a little bit of water but very, very little gas, but it was always flowing. So anyway we backed the rig back out of the way and fixed it. We had to do a lot of welding on it because if you can imagine, the debris coming out of the well had cut some of the girths in half on the derrick and some of the stuff. But we got that all fixed up and we were moving it back on to the well, just getting ready to move it back on and the darn thing kicked off again. It took off. Of course, now we're sitting there without a rig on it you see and the rig was back out of the way when we did the work on it because we didn't want to work too close to the wellhead on it. And the darned thing kicked off again and we never were able to get back to it. We drilled then, a relief well to it and eventually they plugged it off eventually, but it took a long time.

#116 SB: I guess it created a sort of ice volcano.

ET: Well, it did, because the thing was producing more water than anything. The gas that was coming out of it, it wouldn't have been enough to heat half of Calgary, there was very little gas but there was a lot of water. And it was coming from a very shallow formation, about 2,300 or 2,400' deep if I remember. And it was fresh water, if it had been salt water it wouldn't have froze near as bad but it was fresh water. And of course, it just kept piling up, piling up and then as it spills over it freezes you see. And eventually it froze something, I think if I remember rightly 91' high and 120' across. Eventually it quit flowing out and then it would flow underneath.

SB: And they drilled another well at King Christian Island too.

ET: Yes King Christian. I can't tell you too much about King Christian because about that time we decided that Dome Petroleum would not be the operator any longer. We really didn't want to stay as operator too long and we had been it for about a year and a half or 2 years then. So we had hired another chap to run the thing, a fellow by the name of Jim Strain. In the meantime, Charles Hetherington had come on board as the President of Pan Arctic. They needed someone to look after the field end of it because I had to get back to Dome because there were so many other things we were doing and they hired Jim Strain from Gulf Oil Corporation. Ironically, poor Jim, we just sputted King Christian the day he come to work for us. I recall very vividly, I was home in bed sleeping about 9:30 at night and the phone rings and it's Jack Gallagher and he said, Ed, King Christian just blew out. I said, oh my goodness. So the next day we all took off in a company plane and went on up there. It was quite a fire, yes.

SB: I understand there was an inquiry, did any of you have to testify at the inquiry?

ET: There was an inquiry. It turned out that some of the information we were using in those days just wasn't the best. We were using what they call a gas detector. The gas detector is sort of an instrument that plots on paper when you see some gas. We used to use it from

sput to rig release you see. What happened there is we had set the conductor pipe, which is about 300' of pipe and they had turned the gas analyser on and it had showed a little blip of gas, then it showed nothing as they were drilling. They were down at 1,700' when this. . . and they were just about ready to pull out and run some surface pipe, they always used to run about 1,700-1,800' surface pipe. They were already to pull out to run this and they checked the gas analyser, this was all done and it was done very faithfully because we just didn't want to have any problems because we'd had Drake Point and we knew that you just couldn't afford it. But what we'd forgot, I guess, and Jim and I talked about it for an hour afterwards, as to why it didn't show, why we didn't get that gas kick on the gas analyser. What had happened, this was such a prolific sand, it's a beautiful gas sand, just almost like this room for porosity, and what had happened was, they got a little blip when they initially penetrated the sand. But then the drilling mud took over and started feeding into the zone so no gas could leave the zone to get into the mud stream because it must get into the mud stream to get into the surface so the analyser can read it. It wasn't getting into the gas stream. Because the flow was from the bore hole outwards, instead of from outwards to inwards. And we had no reading on it, it was just a straight line. We could never figure out how, and then finally we devised and figured that that's what happened is there was just enough mud going back into the formation that the gas couldn't get into the mud stream so we could read it upstairs. And that's how. . . then they pulled out of the hole to run the pipe and bingo, here she comes with it.

#165 SB: Did you lose any mud into the circulation, like did you lose circulation?

ET: Well, they say they didn't. I doubt if they were even looking at the time. I'm sure they were mixing mud and what have you and it probably never twigged that they were losing it into the formation because they didn't mix enough. No, they didn't lose circulation, no.

SB: Did Tip Maroney ever play a role in any of those wells up there?

ET: Tip, only as an advisor. I think a couple of times we took him up once in awhile with us. I think he went up on this well. As a matter of fact, I think he went up with me and Jim Strain. But by then the well's blowing out, what can you do. We'd got the rig back off the well and it was a matter of drilling a relief well and what have you. So that's all you could recommend in those days. But he came up with us yes.

SB: And there was one other well, Cottaneally??? or something like that?

ET: Well, Cottaneally, that wasn't in the Arctic though, that's in B.C., or in the Yukon. I can get to that one in a minute if you're done with the Arctic.

SB: Sure. Yes, I think that covers the Arctic pretty well.

ET: Yes it should. Just further, slightly on the Arctic, I'll be very, very brief. About that time, or previous to King Christian and right after Drake Point, we set up Rae Point, which today is still Rae Point, it's there. It became the headquarters for Pan Arctic with their base camp and everything there and set up real swish and all that sort of stuff. But it was discovered, not discovered so much but picked primarily because there was a place to build a good airstrip for summer time air landing and summer time operations. And a good spot where we could bring a ship in with supplies. Because we recognized very early in the game that you couldn't fly everything around there because it was just too

costly, there was just no way. Primarily, a sack of drilling mud for instance or a sack of cement or a gallon of fuel, a sack of cement in Montreal cost \$2.50, a sack of drilling mud \$2.75 and a gallon of fuel about 65 cents. But when you got it on to the lease it was up to \$28 for a sack of cement, \$26 something for a sack of mud and fuel was about \$3.50-\$4 a gallon. But that was because of the aircraft you see. So we recognized very quickly that you had to ship as much stuff in. So we set up this Rae Point based on a little cove where you could bring a ship in and unload it and a tremendous airstrip where you could land.

SB: You also mentioned Charles Hetherington, do you know why he was hired, or who was responsible?

ET: I don't know why he was hired. I guess they decided that they needed a President for Pan Arctic. I think at that time Dr. Sproule wanted to get back to his own practice. He had Sproule Engineering and J. C. Sproule and Associates. I think he probably wanted to get back to his practice and what have you. I think a lot of the companies felt that they should have somebody from the outside running Pan Arctic that was acceptable to everybody and Charles Hetherington was chosen as the man.

#208 SB: So did Dome more or less leave all their operations in the Arctic after that?

ET: Yes. Dome at that time relinquished being operator of Pan Arctic, yes. We went back in ourselves afterwards as Dome Petroleum, 2 years later with another drilling rig of our own. But we didn't have any luck. I think they drilled about 3 dry holes. But we did have our own rig in their afterwards and it was strictly away from Pan Arctic, it had nothing to do with Pan Arctic. We used some of their facilities, like we used to land at Rae Point and stuff like that but that was all.

SB: So did they regret their excursion into the Arctic?

ET: Dome? I don't think so. You never, ever regret it if you got a dry hole, you just said oh well, let's go over here and try again. I think at the time we were rather fortunate. We farmed out to a real good partner, one of the gas companies in the U.S. that needed some gas supplies. Hopefully down the road, they thought they did anyway. And we farmed out to them so it didn't cost all that much so we were rather fortunate that way.

SB: So then you continued operations back in western Canada. What was your position by then?

ET: I think I was manager of operations worldwide or something of that nature.

SB: And was this Cottaneally. . .?

ET: Cottaneally, it was drilled quite early in the game. It was drilled before we went into the Arctic, with Pan Arctic. It was drilled right after we were in the Arctic with Winterharbour. We decided to go in and drill, we did not drill Cottaneally, we drilled at what they call the Beaver River well. It was about 28 or 29 miles from the Cottaneally well which was drilled by Amoco. I think they called themselves Pan American Oils at that time. There wasn't too much happening up there. It was a remote area, you used to have to leave Fort Nelson and you could drive in there in the wintertime, on a winter road. We put an ice bridge in across the Nelson River, then you could get from there to your locations. One thing that did happen which was a bit of a tragedy sort of, there was a mud slide took place on the Pan American well, on the Cottaneally well itself and 2 quite

good friends of mine, John Blynn and Rees Nielsen. Rees Nielsen was the tool pusher for I think it was Peter Bawden Drilling at the time and John Blynn was the field engineer for Pan American. When this darn mud slide took place it took the pick-up truck that they were driving in. They happened to see it beginning, they saw some cracks and they got out of the truck to have a look at why they were there and about the time they got out of the truck this thing just gave way and it was, well, a land slide. It washed the truck and John with it. Rees was able to grab a tree and it was the only thing that saved him. A tree up high enough to where it wasn't part of the slide and he hung on to that and he managed to survive but Blynn didn't. It run him right on down into the La Biche River, the whole works just slid and they never even found the truck afterwards, which was a bit of a tragedy.

#258 SB: I had the name Mel Reasoner, was he tied in with working on the well?

ET: Mel Reasoner was with us. No, Mel didn't work on the well. Mel worked at that time for oh my, what's the name of the company, some people out of New York, Canada Southern, that's right. Canada Southern had the well at a farm out from us I guess, that's probably the way it was. They were the operators but Mel didn't have any operating people so we took over, Dome did and we operated the well for him. But that was called the Beaver River well, that wasn't the Cottaneally, no.

SB: So by that time the influence of Dome had spread over into other countries?

ET: Yes, it was starting too, we were in the States and places like that.

SB: How long did you stay with Dome?

ET: I left in 1975.

SB: I guess things had changed quite considerably from when you started?

ET: They had, yes, they sure had. I guess they went from nobody to, before they had their problems, they were 4,000 people. I worked personally on the Beaufort Sea. I was the lead superintendent, engineer, call it what you want, on the Beaufort Sea. I worked on that for 3 years prior to leaving Dome. We elected to go to the Beaufort Sea because we had this acreage offshore, we'd got that quite early in the game, we'd got that probably in 1969 or perhaps '70. We had farmed it out to a U.S. company, which was the Hunt Brothers, you probably have heard of them. They're Placid Oil up here but it was the Hunt Brothers down there. They had done a bunch of seismic and gee, the seismic just looked great. Seismic always does. But it came time for them to drill a well, they had a drilling commitment with Dome Petroleum to drill. And they were unable to, being about that time we had this big thrust that if you're not Canadian you do nothing in Canada type of thing. Mr. Trudeau at that time was flexing his muscles, he'd been in power a couple of years, he was telling everybody how great socialism was and stuff of that nature. So when they applied for a drilling permit they couldn't get it, no way they'd get a drilling permit. So Jack and I went down and we had a nice long meeting with old Jean Chretien and Trudeau and several other people down there and we said, if we were to do the drilling up there could we get a drilling permit. They said, we'd stand a better chance, although we weren't classed as a Canadian citizen then either but we would stand a better chance because I think, at that time we were 45% owned Canadian, the rest was

American. So anyway we come back and we decided that we'd have a meeting with Hunt. So Jack and I took off to Dallas and had a nice long meeting with him. They said, that was fine by them, they'd put the money up if we could get a drilling permit. Also they would take the first drilling system that we could get and they'd drill the wells with it. So it looked pretty darned good to us and we took it from there. I spent about 7 or 8 months I guess, back and forth to Ottawa trying to get some kind of a consensus of how we should drill the Beaufort Sea. Because I'd had a lot of experience in the Arctic Islands, I knew what the weather was like and what have you. And some over in the Inuvik area because we had drilled ourselves up at Fort McPherson on the mainland, we drilled several wells up there. They were dry holes but we had drilled them. We knew our way around, you know, we knew how to operate. So we decided that if we could get ourselves some ice reinforced ships, would that be okay. But we couldn't get Ottawa to approve it because they didn't know what they were approving. And rightly so, you see.

End of tape

Tape 2 Side 2

ET: But finally after a lengthy environmental study, which was conducted by ourselves, Imperial Oil and Gulf Oil, we contributed to a large environmental study which was to be done by the government. And we paid the bill. Checking for whales and what happens to the plankton and what happens to the fish and where are they going to go and wildlife and stuff of that nature. While this study was going on we were doing a bunch of engineering with some offshore drilling people in Los Angeles and we came up with a design for a drill ship. That you could ice reinforce and take it up there and drill wells offshore with. So finally after a little over a year, they gave us a drilling approval. They called it an approval in principle. So then that meant that we could go ahead and start building some ships you see. Because with that, I think it was a fair assumption that yes, they'd let us drill once we got the thing built. So then in the meantime we went back and worked with Hunt's engineers and his people, he had what the call Penra??? Drilling, which was an offshore drilling company but they'd never worked in the Arctic mind you. But they contributed quite a bit to the design and then Gulf research people looked at it and they helped us out on some of their. . .because they had done a lot of research on deep drilling and stuff of that nature. So I worked on that for about 2-2 1/2 years. Got it up to a point where the drill ships were in the shipyards to be built and all the equipment was ordered and everything. By then I was a tired man I'll tell you because I was working out of New Orleans and Houston, Vancouver building ice breaker work boats, Ottawa and what have you. So that's when I decided I'd had enough. So we hired a full staff for what's now Canadian Marine Drilling, or Can Mar, we hired a full staff of them and I stayed with them for about 5 months. Then retired.

#043 SB: I read somewhere that the government required you to have 2 complete drill ships?

ET: You had to have what they called a back-up system. You could have both of them drilling

but you had to have a system that was available if something did happen to the one. So we said, that don't make any sense to have one sitting in a dock somewhere, could we be drilling with both. We devised a plan then where, yes, we could be drilling with both providing we had a) an extra set of blow-out preventors onshore, available and an extra string of drill pipe and some extra mud and cement and stuff like that. So that we wouldn't have, you see, you can visualize, with the 2 rigs drilling, if this one blew out and this was in the hole with the drill pipe you may not be able to get it out to get the drill pipe over to do any good. So that's why we had to have it onshore. But we did not have to have another drilling rig. First they wanted us to have just one standing by and we said, that's dumb, that don't make any sense. So then they relaxed and allowed us to have both systems drilling providing we had back up on shore, which we did.

SB: And the cost of all the drilling equipment, was Dome responsible for that or was it these other companies?

ET: Dome put up the front money, the initial money to build the drilling ships and all the drilling systems, yes. The rigs were to be leased to the Hunt people. The lease was built around a payout of 3 or 4 years, I don't get involved in that stuff. It seemed to me it was a 3 year payout.

SB: So when you said you left everything, is that when you left Dome?

ET: Yes, pretty well. I retired.

SB: So you decided you wanted to get out of the big company?

ET: By then as I say, I think we had 750 people. I had been working on these things so now suddenly, I'm not a drilling man, I didn't want to be responsible for the drilling operations. I was an oil company type so I asked if I could come back to the company or something, then I took a look at 800 people, where I was used to 4 or 5 and I just elected to not do it. And I think Jack understood, he does now anyway because he's still a very good friend of mine. Then Mr. Dunkerley, he left I think it was a year after I did. But again, he was caught up in the same problem. The new people were there and if you're the old people, it's different, you're not used to it. Dome was a fine company though, all the time I was with them which was close to 25 years, they were a fine company.

#071 SB: Do you have any opinions on why it was such a successful company in its???

ET: I would like to think it was a successful company because we had a lot of darned good, dedicated people working for us. All of our field staff and all of our geologists, they just couldn't find enough plays you know. Because they knew that if they found a good play we'd try and find the money. And if we found the money, the old man would drill it. The old man was me you see. So I think our young geologists were quite gung-ho, they just liked it. And that's where all these plays have to originate, they have to come from the geologists. And then Jack, who was a geologist himself could interpret their plays. Then if he liked it and they liked it we'd have a little Board meeting and we'd all take a look at it and I'd come up and say, yes we can drill it, here's what it'll cost us. Then we put the pencil to it for economics, Charlie did all that and right there we could make a decision. I think that we were able to make quick decisions and we made a lot of them. Back in the olden days when the Crown sales were on we were able to . . . Anyway, what would

happen, I think I briefly mentioned to you what happened in Halbright, Saskatchewan but there were other things that went on down there. We weren't above pulling some fancy shenanigans, call them what you want, to a) get farm out or get Crown sales or something of that nature. One particular Crown sale, we had bought a small parcel of land in a sale in northeastern B.C. and there was a lot of land coming up for Crown sales. So we drilled this particular well, a tight hole and we had discovered a fairly good oil zone and we felt that if this news became public that the price of land would just become astronomical very quickly. So we had to do everything we could to not let it be public. This is considered legal and everything like that. Of course, scouting is going on in those days, they had a tremendous number of scouts around and this particular well, we purposely set pipe through into a water zone, we perforated a water zone and put the pump on the well and let her pump there for 3 or 4 days, pumping water. And you know that the scouts would go out and turn a valve and see water and they were reporting back to their people that we were pumping only water, no oil and stuff of that nature. So very quickly the interest in the area died, so then the Crown sale came up and we were able to buy, I think at that time, about 3 sections. Which we probably couldn't have bought but we bought them at a good price. So then we were able to develop a pretty fair sized field because of that. And it was a gimmick that we felt that all of our people were so gung-ho for the company that they kept these things all to themselves. As soon as you told them what you were trying to do you couldn't pry it out of them you know. Then in the Zama field when drilling was going on there you were scouted there with all kinds of people trying to do very devious things to find out what you were doing at your well. We devised a tent in which we stretched a tent over the entire rig. Which worked fine until one night I happened to be up there myself, in the evening, I was driving into the lease and I look and here we are, I can see the blocks going up and down because the light are on inside the tent. No lights outside and the shadow, you can see it going on. So if I were a scout I would have sat there and watched the blocks go up and down, know how deep we are. So we had to change that, no trips at night time, do it in the day time when you don't need the lights. So then one other occasion I noticed, I used to always try to be there at the tail end of the well so we could make the decisions there without having to phone because the phones are dynamite too. If you're running a tight hole. And I noticed this helicopter flew by one day and a guy leaned out taking a picture. I thought, gee, a photographer around. But the next morning he's there again taking the same picture. Suddenly the bells ring, what's he taking a picture of, the drill pipe laying on the rack. So he counts the joints, say there's 100 there today and tomorrow when he takes the picture there's only 90, that means there are 10 joints in the hole so you made 300' of hole so he knows how deep you are. So out comes another big canvas to cover up the drill pipe. But little things like that were going on, it leant a little interest to life.

#121 SB: Do you want to comment on Dome subsequently, what might have led up to its problems?

ET: That's a hard one to guess really. I suppose it's a product of 2 or 3 different things. #1 I suppose, eventually a lot of the companies of a small nature and they get a little bit bigger

and they flex their muscles and decide they'd like to be bigger because big is great and what have you, so they reach out to try and take over other companies. I suppose that they just reach too far. I think a lot of the problems perhaps stem from computers not being able to tell you an exact picture of what's going to happen. They can tell you what did happen because it's what you put into the computer. In those days, the days of that, it caught a lot of these oil companies with engineers and geologists saying yes, here's oil at \$10 a barrel, next year it's going to be \$11, next year \$12, \$13, \$14, it's going to carry on until it's up to \$65 a barrel. They're saying that consumption is going to go up at a rate of 4 or 5 or 6 % per year. So the computer spits that out and it shows the darnedest thing in the world, if you can buy a company for a million dollars today when all these figures are plugged in, it's \$10 million tomorrow type of thing you see. But then the computer can't tell you that a) since oil and gasoline is now \$1.25 a gallon, I'm not going to drive as much, Joe Blow is not going to drive as much. So consumption doesn't go up 3 or 4 or 6%, whatever they extrapolated, it goes down. So now there's one curve that went to peanuts. Then you've got some intervention by the National Energy Program, not allowing oil to move up to its level, what it's worth. So instead of it going up to \$60 a barrel it sits held static or gone down. So I think if you were borrowing money on all those curves, which all these companies had to do, there was just no way that they could begin to pay the money back. Especially at that time with 22% interest and things like that, it just wasn't there. I think this contributed as much as anything to Dome as it did to Turbo, you can name half a dozen companies that got caught up in it. And it's easy to do because you get to believe in what you see.

SB: I was wondering if you could sort of look back over your career. Do you feel that there was something that was your most significant accomplishment from your point of view?

ET: That's a toughy. I don't know, I don't think there's any one thing particularly. I suppose the biggest accomplishment is trying to keep this service rig company that I've got now, afloat. Because I have all my own money in it, my partner and I, we have our own money in it which is a little different than spending somebody else's money. But we've managed to keep it afloat and we've got a fairly good little organization here. We have a lot of very dedicated people working for us.

SB: When did you start T. . .?

ET: The service rig company, 1979.

SB: And who's your partner?

ET: A fellow by the name of Al Patterson. He's a bean counter or a CA.

SB: What are the activities that you are involved in?

ET: We have well servicing rigs, we do well servicing for various oil companies. I'm really only kidding when I say that's probably the best accomplishment. I think it is an accomplishment to keep running but there are other things. I would like to think that the Beaufort Sea, that I was very instrumental in getting it to where it is. Maybe not today but where it was when we first went up there. I think the Arctic. I certainly pioneered the darn thing for what it was worth. I worked on a lot of projects in the oil industry.

SB: Are there any people that influenced you do you think, that inspired you or something?

ET: You mean that I had as an idol? Not particularly that I can think of, no.

#173 SB: What was it like to work with Jack Gallagher?

ET: That was a fine experience. I don't know just how you'd put it. Again, Dome was a fine company. One of the reasons for it was Jack Gallagher was there, and Charlie Dunkerley and Bill Richards and Don Wolcott and the whole darn bunch of us really. We all got along good together. We'd sit at a meeting and you said you piece and a decision was made. And Jack was always sitting there. He was the arbitrator. But he was good, you could always sit down and talk to him.

SB: Do you feel as if the industry has changed that much today from what it was?

ET: Yes, it has, but it has to change too because it's so big now compared to maybe what it was, even 10 years ago. And you certainly have young engineers and young geologists who are taught different things at school than we all were. They have a different sense of values so the net result is that it has to change. Some of those fellows are sharpies out there, they're real smart. They apply some of the modern concepts which we didn't even have to apply, like say, the computer. We always used to use a slide rule or the old pen and pencil. Nowadays they stick it on a computer and within 3 minutes it's done for you what used to take us weeks to do. So when you take that into consideration I think that the oil industry is not the same. And the people in it aren't quite the same, they don't know each other quite as well as you used to back in the older days.

SB: Before we close are there any other comments that you'd like to make about your career or the industry?

ET: The only comment I make is that gee, I wouldn't want it any other way, I enjoyed every minute of it really. To me and my family, it was great. I have one son, he's sort of indirectly in the oil business and my wife was always a very good oil wife. I guess it's just it. I wouldn't have it any other way.

SB: Well, it's been interesting, I'd like to thank you for taking the time.

ET: You're more than welcome. I hope it does you some good.