

## **PETROLEUM INDUSTRY ORAL HISTORY PROJECT TRANSCRIPT**

INTERVIEWEE: Scov Murray

INTERVIEWER: Nadine Mackenzie

DATE: July 20, 1983

### **Tape 1 Side 1 – 28:00**

NM: This is Nadine Mackenzie speaking. Today is Wednesday the 20th of July 1983. I am at the office of Mr. Skov Murray at AEFO Resources in Calgary. Mr. Murray. Where were you born?

SM: I was born in a Scottish nursing home, Calgary, Alberta, Canada.

NM: Which year?

SM: Oh, November 12<sup>th</sup>, 1918. I was a peace baby, the day after Armistice.

NM: What did your parents do?

SM: Well, my father was in the clothing business in Calgary. My mother was a good housewife.

NM: You have any brothers or sisters?

SM: I had one brother who was lost in the last World War.

NM: Were you the only one who went into the oil patch?

SM: Yes.

NM: You are. Where did you study your first education?

SM: Well, my first education was at University of Alberta where I took first year engineering and then I had to get a labor exit permit in order to go to University of Tulsa in Tulsa, Oklahoma, and where I took petroleum engineering and this was a requirement. It was a course that was not taught in Canada and is still not taught in Canada. So I wanted to get a Bachelor of Science in petroleum engineering and had to go to the States. And so I chose the University of Tulsa in Tulsa Oklahoma.

NM: Why did you choose engineering?

SM: I chose engineering because having roughnecked with Royalite Oil Company in Turner Valley and on wildcat locations up and down the Foothills, I felt that there'd be more fascinating phase to life than then just working on the rigs. And so I decided to become an engineer and enhance my life in studies on engineering.

NM: How many years did you spend at the University of Alberta.

SM: Well, as I mentioned I took the first year there because first year is general engineering for everybody. But by the time you get to your second year and you're specializing in petroleum, you've got to go to the university where they teach petroleum.

NM: Right. So how long did you spend in Tulsa University?

SM: I spent a total of, equivalent of three years in Tulsa and one year at University of Alberta, Edmonton. The reason why I say the equivalent, actually I was down there a little more than two years because I took summer school each year, and so worked off a complete year by taking summer school. Twice.

NM: What was your first job after you graduated from the University of Tulsa.

SM: Well, by the time I finished University of Tulsa I owed people money for supporting me in my tuition and Imperial Oil was offering a hundred and seventy-five dollars a month and I went, so I went to Venezuela and worked with Venezuelan Atlantic Refining Company, which is offering four hundred dollars a month U.S.

NM: And what did you do in Venezuela?

SM: In Venezuela, I was I did everything. I became District Engineer down there because of my previous experience in working on drilling rigs and I did production engineering, reservoir engineering and drilling engineering as well as surveying and civil engineering.

NM: While you were there did you travel to some other places in South America?

SM: No, but I traveled widely in Venezuela itself where Venezuelan Atlantic Refining Company had concessions.

NM: Who is the man who hired you?

SM: I don't remember the name of the Atlantic Refining Company guy. But when I graduated from Tulsa, I had 14 job offers.

NM: 14? That's a lot.

SM: Yeah. And well, I was pretty well top in my class. I had had a considerable number of years in roughnecking on a drilling rig. And so I was a cut above the average guy that graduates who has no practical experience whatsoever.

NM: So, did you choose Venezuela because of the money or because you liked to travel too?

SM: Oh, it was a combination of both of them. I've always wanted to work in foreign areas. And at the same time, I think I said to you previously that I owed money when I finished my college degree, and so I wanted to pay it off as soon as I could.

NM: How long did you stay in Venezuela?

SM: Two and a half years.

NM: And then you came back?

SM: Then I came back to Canada and asked Imperial Oil if they could use me and won here again because of my experience particularly in drilling. Imperial was interested in setting up a drilling engineering group and I became the first drilling engineer in Canada as a result of Imperial's desire to study the engineering science of drilling. And this was the first time any company had set up a drilling engineering group.

NM: And how many persons in this drilling engineering group?

SM: Well I started with myself. and one other person and this, over a few years gradually increased to five engineers. In headquarters, I was known as Regional Drilling Engineer and in headquarters Calgary and there were drilling engineers in all of our districts like Dawson Creek and Edmonton, and Regina and Peace River.

NM: Was it at the time when Imperial was expanding?

SM: It was a period of great expansion and we were just going night and day and weekends and holidays with many rigs and much activity in all areas.

NM: Were you staying mainly in Calgary or were you traveling all over the place?

SM: I was constantly on the move from all over Saskatchewan to all over Alberta to all over the oil and gas producing areas of British Columbia.

NM: And for how long did you keep this post?

SM: Well, I've been in drilling all of my career and I was active in regional drilling engineering and have been through my whole life, but in 1960 in connection with my drilling engineering work, I did a lot of drilling research and development of new ideas in drilling, and in 1960, I was asked by Jersey Production Research company of Tulsa, Oklahoma if I would come down there on a years assignment to write a textbook on the science of drilling with compressed air. In other words air drilling in its three forms of straight air drilling, foam drilling and narration drilling. So the family and I moved to Oklahoma and I completed this mammoth task of writing a book on air drilling in less than six months. Then I traveled all over the world to Standard Oil, New Jersey affiliates studying their operations to determine if they had any application for air drilling in any of its forms. I found that this that this, a number of affiliates did have and so I was instrumental in in getting air units, compressors and boosters to Turkey and to Greece and to Libya. So then I went over to those places and taught their engineers and lectured to their engineering staff on the art of air drilling and the one-year assignment went into two years because my services were also asked for as a troubleshooter on difficult drilling problems, and that connection I went to Portuguese Guinea on the west coast of Africa and several other countries studying drilling problems and helping the people overcome them.

[00:09:58] NM: Can you tell me about the drilling equipment?

SM: Well drilling equipment was in my day, early days of starting was steam-powered and the rigs in Turner Valley were all steam rigs. It was during the advent of Leduc ten years later that diesel power began to take over from steam and the initial equipment was very small like the slush pumps and all associated equipment, they carried very few drill collars. The drill pipe was four and a half inch and one of the first things that I did when I took over as, well set up this new drilling engineering group was to introduce the jet bit to Canada. And this was before bit companies were making jets installed as an integral part of the bit and we had to use a special sub, which I called the humble sub because it was developed, system was developed by our affiliate in the States, Humble Oil and Refining Company and it was a special sub about three feet long that had long pipes or water courses directed through the, through this sub and the bit screwed onto the end of it so that the water courses were directly between the cones of the bed. It was a real nuisance because every time you dulled a bit it had to go to the machine shop and had to be resurfaced with a new bit put in place.

So we had 5 subs in total of which one was in the hole, one was always on the walk and three were coming and going and at machine shops. But it was a very worthwhile thing and proved to be revolutionary to our drilling industry in Canada in that instead of using small 7 1/4 by 14 pumps in small equipment, the jet bit showed that with increased hydraulics drilling rate was materially increased through bit horse, increasing bit horsepower principally nozzle velocity and bottom hole cleaning. And so gradually over the next 10 years drilling contractors acquired bigger pumps and overall bigger equipment, more powerful diesel engines and this really revolutionized our industry in Canada.

NM: You were a roughneck. What is, from where is the term roughneck coming from?

SM: Well that's easily explained because a person who works on a drilling rig works there under difficult and dangerous conditions. The floor area around the hole is muddy frequently, in pulling pipe, you oftentimes get sprayed with mud from top to bottom. It is a very hard job and it is a job that requires excellent teamwork, people working together. A person who isn't a member of the team, they want to fire him and get somebody who becomes part of the rhythm and the system of the team. In my day, we worked 8-hour tours or shifts as people will say and every weekend we would, we would change, or every two weeks, we would change tours, there were three of them, daylight which were from 8:00 to 4:00, afternoon tour from 4:00 to 12:00 midnight and graveyard from 12:00 midnight till 8:00 in the morning.

NM: Graveyard? That was the name of the shift?

SM: That's the name of the shift because it's the deadest time of the whole 24-hour period and you really have to stay awake and keep your senses about you, particularly if you're pulling or running pipe to change a bit. So a roughneck, also when they're running a drill stem test can often be sprayed with oil and be exposed to gaseous oil and that isn't a very pleasant thing. So a roughneck has to develop what I call a hide and that is a skin, a thick skin that'll take it and he's got to develop an attitude of, that's got guts behind it because there's no place for a sissy on a drilling rig. Now early in the game, because few people wanted to leave Turner Valley and all the work was in Turner Valley, whenever they had a wildcat well, which is an exploratory well, I was invited to work derrick and that is that I was 90 feet up in the derrick handling three joints of drill pipe that were screwed together from that position. And when it's 40 below zero and you're standing up there what they call the monkey board and handling this pipe., it's damn cold and you frequently feel like you'd like to come down but you don't do it because you've got your work to do and that's your position. So the whole thing adds up to the fact that you've

got to be a rough type of a person to work on a drilling rig, you've got to be tough and they evolved the name, a roughneck. I still have my...

NM: Can you tell me about your work in Turner Valley?

SM: Well, I when I graduated from high school, I took a job with the Canadian Wheat Board as office boy, but that didn't pay much money, that was \$40 a month, and I started looking around for jobs that paid more money. And I was always a pretty tough guy, I used to go backpacking and mountain climbing, well, I still do I've been a member of the Alpine Club of Canada since 1943. And so I wanted to get something to paid me more and so I found out in the Wheat Board that if I took my vacation before May the first I could get three weeks instead of a generous two weeks. So I went up to Exshaw and worked on the bull gang at the Exshaw company plant. Well, I was there two days working eight hour shifts and I said to management, could I work 16 hours instead of eight hours. And they were short men and they were very happy to have me work 16 hours. So for two weeks, I worked 16-hour days and finally top management got wind of it and said that I was breaking the laws, the labor laws in working 16 hour shifts and I would have to work three 16 hour shifts and then work an eight-hour shift and then I could go back on three 16's.

NM: How could you manage on so little sleep?

SM: I could do anything and still can.

NM: That's fantastic.

SM: And still can. So I came away from Exshaw with so much money, I needed a sack to cart it all the way and I paid in income tax far more than what I was even earning at the Canadian Wheat Board. So I lasted a week at coming back here at to Calgary and working at the Wheat Board. And finally, I packed it up and went to Turner Valley and hired down with Royalite Oil Company and was able to get right on the rigs as a roughneck, and I've never looked back since then.

NM: Which year was this?

SM: This was May of 1943 and I still have my original pass to the drilling rigs because it was the War years. I still have my pass to the drilling rigs from that time with my picture on it, signed by King Houston who was assistant field superintendent.

NM: After Oklahoma, you came back to Calgary and then you said you had a few quiet years. So what were you doing during this point?

SM: Well, when I say quiet years my life has never been quiet but during that time, I developed new techniques, developed, of drilling new ideas in drilling equipment and things to enable us to drill faster, cheaper. But it was in 1965 that another big opportunity came along and that was that Imperial Oil was the only Standard Oil of New Jersey affiliate that owned drilling rigs. All other affiliates had at one time or another owned their own equipment like Imperial, but they had all dropped that equipment. So the Board of Directors of Jersey out of New York says, how come Imperial Oil, you have your own drilling rigs, your own trucks or transportation department, your own warehousing facilities and your own mechanical department. Surely this must be costing you a heck of a lot of money, and have you ever

studied it out to see if it's an economically viable operation. And so I was appointed to work with a chap by the name of Vern Hunter who was set up as drilling manager and I became his technical advisor and Standard Oil of New Jersey gave us two years to prove on paper following Jersey accounting procedures and rules and us having our own books. Is it worthwhile for us to have our rigs or not, do we make money or don't we make money, and the same thing applies to the warehousing, to the garage we had to service the trucks to the trucks and everything.

Well, I went up there and in two years, well at the end of the first year, following Jersey accounting rules and procedures, and incidentally the books weren't kept by me, they were kept by our Comptroller's department, anytime that I needed a new slush pump or I needed a new string of drill pipe, I had to take it out of my earnings and I didn't have somebody handing me money indiscriminately out of their pocket. But anyway at the end of the first year, I showed a gain of almost a million dollars net on the whole operation, including the garage, the drilling department, the transportation department, the warehouse department and the mechanical department. At the end of the second year, I showed about a seven-million-dollar net profit from the same operation and my presentation was made in front of the producing worldwide coordinator of Standard Oil New Jersey and he came out of there very satisfied that our operation was well-merited and had been very well proved that we should have our equipment and maintain that type of operation. To this day. We still own some company rigs, although the scope of the activity of our drilling has decreased and the scope of our warehousing and so on. They got rid of our trucks which was a real money-making proposition and I still am sorry that they let that setup go because we were making money hand over fist with that, which is quite different to a lot of commercial trucking companies.

But anyway, I worked on that project 1965, '66, '67, then I became, then Vern Hunter retired and I became drilling manager and they reorganized the setup and put Mr. Teske in as field services department manager, and as drilling manager, I reported to him. And in the summer of 1968, another big opportunity came along, and this was a high honour, at least I felt it was a high honour in that the Board of Directors of Standard Oil New Jersey out of New York noted with alarm that there were more and more blowouts occurring in worldwide operations. And a blowout is an uncontrolled flow of oil and gas to the surface, uncontrolled, so it's spewing oil and gas all over the environment, hazardous to environment and hazardous to human lives. And so Standard Oil of New Jersey directed their world producing coordinator to get a, to develop a team of three people that could work up a five-day course in well control and make a manual and then travel to all affiliates worldwide preaching and lecturing on the gospel of well control. And I was chosen to be, out of all the engineers in the Jersey system, I was chosen to be a member of a three-man team. My two colleagues came from Humble Oil and Refining Company and I used to jokingly during my lectures refer to the fact that when I was asked the question, how come I got on the team I said, well they had to have one honest guy on the team and with two Humble guys, they had to have one Canadian to keep the two of them, two Humble Oil and Refining company people honest. So I travelled continuously, I went down in the fall of the year of '68 and worked steadily and continuously with my colleagues in developing the course and in developing a book about four inches thick that we could leave with affiliates after we had lectured and then through 19, in January of 1969. We were on our way to Dakar Senegal in West Africa. and after we lectured in Dakar we went on to Agadir Morocco, I was home for about a week and we went on to Australia. I was back in Calgary for about another week and I went on to Norway and that was the story of my life for the next four and a half years. And so I traveled continuously. I had one week's vacation in four and a half years because I was traveling continuously on this well control setup. Eventually Imperial woke up to the fact that I might be getting a little tired and it was an extremely strenuous job because you would come from one-time area in the world back to Calgary, have a week you'd have no time to adjust and you're on

your way to another time area. For example, some time, you tried coming from Saudi Arabia back to Calgary in one week's time, do all your washing get money, try to rest and head off to Australia, where you not only cross umpteen time zones, but you crossed the international date line and lose days and gain days.

### **Tape 1 Side 2 – 30:00**

NM: Did you ever suffer from jet lag?

SM: Well, you always suffered from jet lag, in four and a half years my body never did get adjusted to any time schedule because I never was in any place long enough for it to completely adjust and adapt, and when I came home, and the longest period of time I had at home was over the Christmas season when I was home for about three weeks. And that is just about enough time to get back to normal. But in four and a half years, I never did miss a day's work or never was sick and never missed a trip, never missed my job.

NM: What about the other people traveling with you, you mentioned they were changing every six months?

SM: Well, the other people that were traveling with me from our original three that created the course I was on, I was on the course and traveling continuously with nobody spelling me off in four and a half years. My colleagues, the two that started with me went the first year and then they were switched out with two new people from Humble, about every nine months. So there were new Humble Oil and Refining Company people placed on this thing every nine months. I went four and a half years before I was replaced, but I enjoyed it immensely and I look back on it now with great, as I did then too, with great pleasure. It was a very challenging job and it was a very rewarding job and I came back with a great knowledge of the world and I have a slide collection of some 34,000 slides from all over the, these are Kodachrome color slides from all over the world, and I give lectures to church groups and friends and so on, and so I share with other people the experiences I had in these travels.

NM: What did you do in West Africa?

SM: Well in Dakar Senegal we had the Esso Senegalese people attend our well control and we lectured on the art of well control to them which was a five-day, in other words, Monday through Friday, and we did two weeks of that, finished with them and then went on up to Agadir and there was an offshore operation going there, so we went out on the offshore rig and then inspected it and came back to Agadir and gave our lecture. Always wherever we went, the first thing we did was to visit every rig in the in the operation of that affiliate. So we knew as much and frequently we found out we knew more about the drilling rig than what the local people did. In Portuguese Guinea when I was over there in 1960-61, they wanted to get a drilling rig out of the out of Portuguese Guinea before the monsoons came and the rig was located in the middle of a rice field, which would be a foot under water during the monsoons. And so the emphasis there was to drill fast and finish the hole and evaluate it and get out so and avoid trouble. So that's what, I why I sat on that rig was to assure that there was no problems. But down in Ivory Coast, we gave well control schools there and principally though our work, my work in this period of time from 1969 through four and a half years was that of lecturing on well control, whereas in the '60, '61, '62, I was troubleshooting wells and if they got stuck in the hole or if they had a blowout or if they had lost circulation or some major problem, I would go over there and overcome it.

NM: Then you went also to Morocco, to Agadir.

SM: Yeah, that's right. They had a they had a floating drilling rig, semi-submersible drilling rig offshore Agadir. And we went there, studied the rig, studied the blowout preventer and well control system and the type of training the people had and then we came back to Agadir and gave our five-day lecture two times so that all the crews, members of the crew and the rig got the benefit of the lecture. And so that was the type of work we did there. Same thing with Norway and most other places.

NM: And Australia, you went to Australia.

SM: Australia, they had big operations in the Bass Straits and we gave our well control the first couple of years in, we gave our well control lectures in Melbourne. And at the Southern Cross Hotel and then eventually for the for the last three times, I was down there, three years in a row, we gave it at Sale, S-A-L-E, which is down on the southeast coast of Australia, and here again, we visited the rigs and the drilling platforms in the Bass Straits and they'd already had one major blowout there and certainly didn't want another one. And so we emphasized the places where we thought they needed to pay attention to equipment selection and to training and gave our lectures on well control for five weeks running. Sometimes this was pretty tiring because by the time you'd lectured all week you had Saturday and Sunday to kind of review all your notes and review the things that had been brought up, and then you'd started with another fresh bunch of people on Monday morning for five days. And if you did that for five weeks in a row, this work was not easy, and like I said when we traveled through innumerable time zones and so on why it took a good man to stand up to this.

NM: What about Saudi Arabia?

SM: Saudi Arabia I enjoyed immensely because I'm a great admirer of Lawrence of Arabia. I'm a great admirer of the world of Islam and its people.

NM: Do you speak Arabic?

SM: Well when you come to that, that's rather interesting. I don't speak Arabic fluently, but I know words and I know phrases, I know the, particularly the religious exchanges that take place when you meet somebody like As-salāmu 'alaykum, Wa-Alaikum-Salaam and Alhamdulillah and I have studied the customs of the people and certainly know enough that when I'm invited into the goatskin tent of a desert Bedouin, to take my shoes off at the door and to behave in the manner that I'm supposed to.

NM: Where did you study Arabic, was it there or here?

SM: No, my study of all languages, and I just love languages, like when I go to Indonesia, or I go to Saudi Arabia or go anywhere in the world, I go by sound and I keep my own book and compile eventually my own dictionary of words and expressions purely by sound. For example back in 1961, I was working in the middle of the Libyan Desert teaching Esso Standard Libya Incorporated how to drill with compressed air and at the same time I was running an air drilling operation on the beautiful island of Zakynthos in the Ionian Sea off the Northwest shore of Greece. And when, oftentimes I'd either be in Greece or in Libya and I was over there for four and a half months and the word would come through, hey Libya wants you to jump on the next plane from Athens across to Benghazi. Well in one hour's time, I had to forget my Greek and recall and look at my dictionary and my phone at expressions of words and put

Arabic firmly in my mind. Other times, I'd be in the middle of the Libyan Desert and Esso Hellenic would cable across, send Murray, got troubles. So I'd have to erase the Arabic and in one hour's time it took to fly from Benghazi to Athens, I would have to be fluent again in Greek, and the only way that I was able to do this was to, was by this phonetic dictionary system that I've compiled all over the world.

Right now I could go to Indonesia, for example, take my dictionary with me and in this book, I would have all the people I knew in Jakarta and in the fields that I visited like Pendopo and Lyric and I'd have all their names, I have photographed their images in my mind, I can see them and with my phonetic expression book, I'd step off the plane and I could talk to the customs and immigration people, answer their questions, get a taxi cab to the hotel and do all the small things that you have to do purely by this phonetic expression system that I've had. And I've got books on Arabic and books in Russian, books in Indonesian and so on and that is my system. I love languages and I love people and I haven't traveled anywhere, and I have never been to any country where I found people were not warm-hearted, genuine, loving and caring people.

[00:12:30] NM: What did you do in Saudi Arabia?

SM: In Saudi Arabia, we had the great pleasure of visiting their drilling rigs in all their operations. And one of the greatest thrills of my life was to fly from Abqaiq where we were giving our schools down into the heart of the empty quarter, and the empty quarter has the world's highest sand dunes of brilliantly red sand. When you walk in this sand it goes well over your ankles and you can't walk in at very far, but the whole area is not sand, it's a hodgepodge of sand and desert cabal and so on, but the empty quarter has long been, no one, in written about in rather wondrous terms by the very few people that have been able to traverse the empty quarter and, ??? and his book is a fantastic book, but here we had a drilling rig in the heart of the empty quarter. And so it was just with great delight but not shared by my two people from Humble, that...

NM: Why?

SM: Well, they, I haven't met any Humble people that really enjoyed half as much or got half as much out of world travels as what I did. They just didn't seem to have the yen for people and for new experiences and I lapped it up. So in Saudi Arabia we inspected, once again, we inspected the rigs off in the Arabian Gulf. We inspected rigs all over the desert areas of Saudi Arabia. Then we came back to Abqaiq and Iran and gave our well control lectures.

NM: How do you find the Arabs to deal with?

SM: Beautiful? They have, Arabs and their religion is very, has a very fine code and if you show respect for their customs and the things that they, as you should do, if you're going to go into their country, you're welcome as can be. And if you keep your nose clean and don't act in an adverse manner, which you shouldn't do anyway you'll have no problems. But believe me if you do violate, you're subject to their laws and their laws are, are theirs, and they're pretty tough.

NM: You have [inaudible] who is he?

SM: Well, this man worked over 40 years with Aramco, which is, were a part, were a member of the affiliate team and this man worked 40 years over 40 years with Aramco as a night watchman and when

he retired they dressed him up in ceremonial robes and painted his portrait and presented it to him. I have great respect for Arabs and if they don't like to have their pictures taken, I don't take their pictures and I always asked if I could have permission to take them. And so I've never had a portrait like this on the wall here.

NM: How did you end up having his portrait in your office.

SM: Well that's what you call wheeling and dealing because the painter, the guy who painted this portrait, I asked him if he would do one for me and I happened to be seeing it, this one just as it was drying and he said, oh no, he said he would never paint a portrait twice and besides he was commissioned to paint this portrait and therefore he couldn't do one for me. So I said fine, thanks for considering it, That night however at Abqaiq, I showed my color slides because I am a great seller of Canada in all these trips and I carry beautiful Kodachrome slides of Lake Louise and Banff and the Columbia Icefields and the whole of Canada, and I show them pictures of trout that you catch, I show them pictures of deer and sheep and goats and elk and all of our wild animals, and so I showed them and this man came running up to me after the after the slideshow,...

NM: You won his heart.

SM: That's right. And he said, Mr. Murray, you know that picture of Lake Louise that you have. He said if you will give me that Kodachrome transparency, I will do you a painting. I said, sure I'll give you the thing. I said, you know what you're going to do, you're going to paint it 200 times you'll sell it for thousands of dollars profit out of the thing, but I said I will get my painting and that's what I wanted. So I gave him my Kodachrome and he did my painting and here it is on the wall.

[00:18:19] NM: And you went also to Malaysia.

SM: Oh, yes, that's beautiful spot and the people are very friendly and very good-looking and the pineapple there is out of this world, but I enjoyed, here again, I got my two Humble friends, different ones all the time, but we went up to the Fraser Highlands and the Cameron Highlands and we found an old English Inn up there that, and we looked at the at the palatial quarters of the silk King who mysteriously disappeared and has never been found... [phone rings] involved offshore work in the South China Sea so we would fly from the west side of the Malaysian Peninsula that goes down to Singapore, we'd fly from the west side of that over the mountain chain that the Japanese came down during the last war, and we'd catch a helicopter and go out into the South China Sea to a couple of drilling rigs at Esso, Malaysia had operating there. And we studied the equipment and the well control procedures and then we came back to Kuala Lumpur. We stayed at the Merlin Hotel there and, which was very pleasant and we gave our well control school there. I think we gave four or five weeks of it, schools, back-to-back all that time. And so it was very pleasant for us to get out into the country on Saturday and Sunday like the Fraser Highlands and the Cameron Highlands in order to relax our brains and in kind of enjoy new scenery.

NM: So you always managed to do some sightseeing when you were traveling.

SM: Oh, yes, I was the tour guide and I insisted that we all get away for Saturday and Sunday to sit around a hotel and see the same thing hour in and hour out, no way, not when you can get hold of a car and a driver and sit back and really get out in the country and into the outback and really see the

country and the people and how they live and go and talk to them, and that's why my little dictionary of terms was just a real gem for me. I could talk, my friends couldn't.

NM: And you take photos all the time.

SM: All the time. Yeah, that's why I've got 34,000 of them now.

[00:21:18] NM: What about Iran?

SM: Oh, I loved Iran. Well, I as I told you I loved every place I went and I was very happy to be there in peaceful times and in Iran, well, it's just slipped my mind now, the name of the place, but it wasn't far from Sus or Susa where Daniel's tomb is and we thoroughly, and we were right in the heart of the oil field and way in the wilds and in the middle of Iran, there was little, there were no amenities anywhere. And we gave our well control course there and then we went up to the headquarters of the Iranian Oil Company and gave several courses up there and after we had given six weeks of courses, we, my friends headed for home and I'll never forget because during that six weeks I had talked with some of the Iranian Oil Company officials and said that I'd like to see a little more of Iran after the school, and could they help me out on advising me how to do things, like making hotel reservations. I was on my own expenses, I paid my own way out of my own pocket, but at the conclusion I flew up to Isfahan the beautiful old city of Isfahan. I've never seen such a such a fantastic center of life in my life and it was the headquarters of great Shahs during a great period in the history of Persia. Beautiful mosques, beautiful palaces, and the great Sukar?? Marketplace at Isfahan is noted worldwide as they as a most fantastic marketplace or Souk, that's the Arab word for it in existence.

So it was a funny thing when our airplane landed at Isfahan and my two buddies were looking out the window smiling at me and waving and here I was standing down on the ground and I thought, Murray, what are you doing here? You're all alone. You don't speak the language and you're on your own. But anyway, the minute the plane took off I could hardly turn my back on it fast enough and get into town and find the hotel that I was going to stay at and I did and it turned out to be an ancient Caravan Sarah which is a walled protection deal where people would pay money and come in at night time. So because nobody would live outside the walls of this place because of robbers and brigands and everything. So this was an ancient Caravan Sarah and I got to know people in the hotel and I liked them and they liked me and they all wanted to help me the next day going here going there. Be sure to do this, be sure to do that, I just had one week of ecstasy, just fun really tremendous, and shooting pictures left right and center.

NM: Outside the cities, how did the Iranian react to a white person ???

SM: Okay. I rented a car. I rented a car, glad you asked the question because I rented a car in Isfahan and just me and the driver drove through hundreds of miles of Iranian mountain country, past, we passed through Pasargadae which was the headquarters of Cyrus who was the founder of the Achaemenid Empire and I walked all over Pasargadae and there were people with sheep there and everything. And the old tomb that they claim is the tomb of Cyrus was there and oh, a fantastic experience. And then we drove through canyons and up over mountains, we got into snow alongside the road and we drove down to Persepolis, which was the headquarters of Darius who was the successor of Cyrus, and I hiked all over this great fabulous expensive ancient Persepolis. I just pinched myself and I went from there on down into the perfume area where they make the exotic perfumes and I forget the name now of the

place, but it was just me traveling with a driver, and I had no problems. And we would stop along the way whenever I said, people would be coming down the road with their sheep and goats and I'd say hey, let's stop and talk to them, and my driver didn't even speak English. So we had to, we conversed in French and German and English and Arabic, and then Arabic is not the language, Farsi is the language of Iran. And so I had a whole book on Farsi and we had more fun laughing as I'd quickly thumb pages to try to find the word I wanted. But we had, it took two days to drive everywhere I went...

NM: Could you take photos of all the people?

SM: Everywhere? Yeah. Yeah.

[00:27:12] NM: What do you feel now about the new political situation?

SM: I feel extremely sad because I realized that that the Shah wasn't everything and that he made his big mistake when he had the, whatever it was the anniversary of Persepolis and he went into opulence like you never saw, with his tents and his lavish presents that he bestowed on everybody. And that was the breaking point.

NM: Would you say that it was a fantastic public relations ???

SM: The populace that are hungry, that are ragged that have no clothes and shoes and things like that, to heck with the public relations. Feed the people, keep them happy. Now he made his big mistake there and I feel extremely sad for the people because I fear greatly foreign powers and intervention into the country will not be good for the country.

NM: End of tape. This is the end of the first interview with Scov Murray.

## **Tape 2 Side 1 – 30:00**

NM: This is the second interview with Scov Murray. Mr. Murray, you went to do some work in France, too.

SM: Yes, I worked with our French affiliate Esso rep, on drilling problems that they had involving sour gas, involving deep well drilling, loss of circulation, well control, corrosion, and then I was loaned to the French government for a one-day seminar in which people came from all phases of industry as well as the Universities and I'll never forget the experience because I flew in to Paris in the early morning, was given a half an hour to change my shirt and then went to the, called something or other, it was the French Engineering Institute.

NM: [inaudible]

SM: That's probably it and there was a big amphitheatre and I felt like a bug in a rose bowl because there was a big table and I was at the table with sloping seats going up in the bowl shape and questions were fired at me left, right and center for practically all day long. And it was quite a thing because after I got away from them at about eight o'clock at night, I had an hour in which to catch the plane to Portuguese Guinea. So it was quite a heavy day after flying from Houston, Texas to France and then spending all day long under those circumstances and then jumping on the plane and heading to Senegal

in Portuguese Guinea. But anyway, I've had some good contacts with also the French Research Institute down at Grenoble, and my whole day that I spent with this great group of people was entirely on drilling with compressed air and I had just finished writing a book on the subject and was an authority on that topic.

NM: You went you said to England.

SM: Well, I've principally consulted with Esso Europe in London on their operations which extend into Africa and Europe, and on all kinds of associated drilling problems, which I have previously named to you like high pressure formation and lost circulation and so on.

NM: What happened when you came back from all your travels?

SM: Well when I came back, I spent a little time getting my wind back and getting my body adjusted to the time of Calgary, and it was quite difficult for a while to get adjusted to office routine in Calgary. I didn't really have a particular job because I had been traveling so much and didn't seem to fit in too well. However, that didn't last very long because I got a telephone call from Gordon McNabb who was an ADM of Energy Mines and Resources in Ottawa, and he said that Imperial Oil management had observed allocated me to work for the government at Ottawa in an effort to promote trade and exchange of technology with the Soviet Union, and that I was to be chairman of a drilling subcommittee that would interface with a counterpart in the Soviet Union and that they would be sending people over here to hold technical meetings with me and that I would be going over to the Soviet Union to see their drilling operations and have meetings with my counterparts over there.

Nm: Which yeah was your first trip to Russia?

SM: My first trip to Russia was in November of 1973. And this was in August of 1972 that Gordon McNabb phoned me, this was to carry out a document signed by Trudeau and Brezhnev in 1971, that the Soviet Union and Canada would interface more closely in all kinds of expertise. And so oil working groups were formed, a gas working group was formed, lumber, mining, fishing, manufacturing working groups were formed in all expertise to interface with their counterparts in the Soviet Union. So I had no sooner settled back from talking with Gordon McNabb and was kind of scratching my head on what this job might turn out to be and what it might require of me, when I got a call from Digby Hunt, who was ADM of Northern Development and he said that I was appointed, Imperial Oil had allocated me to be Chairman of the Gas Drilling Subcommittee. So I was Chairman of the Oil Drilling Subcommittee and Chairman of the Gas Drilling Subcommittee. And the reason why they were kept separate is that in the Soviet Union they are separate Ministries. They're not like our Energy Mines and Resources which deals with oil and gas and all other forms of energy. So they sent me box loads of information dealing with the meeting between Brezhnev and Trudeau and dealing with the formation of a mixed commission that would consist of Ministers and Deputy Ministers in Canada and the Soviet Union and then the corporate setup of the various oil working groups, and what I was to really do. And I'd hardly got through reading all that when Gordon McNabb phoned me and said, now we have word now from the Soviet Union that your counterpart in drilling in the Oil Ministry would like to come to Canada. And would you please set up a program and the whole deal to receive him...

NM: Was he coming alone or...

SM: No, he was coming with a whole group, a Delegation, and I had never handled anything like this before. So I said, well, what do I do? And Gord McNabb said, well that's up to you. So I started from scratch, and first thing I had to do was to form a committee of people in Calgary to work with me on this from industry. And very quickly I had an agenda and a technical program and...

NM: Who was on this committee.

SM: I picked my friends from other oil companies like, from oil companies and service companies and people having different expertise because we were having quite an involved technical program. And as a matter of fact, it was so involved that I got United Nations out of New York for simultaneous interpretation, and I really had, I really went first class, and it was in March of 1973 that I met the Soviet delegation in Edmonton. And what a time that was.

NM: How many Russians did you have to look after?

SM: There were six of them and there was no mistaking them and there was no mistaking who was boss and who was the interpreter because they got off that plane from Ottawa...

NM: Did they bring their own interpreter too?

SM: Oh, yes. Wait a minute, when I said yes, no, they didn't, no. Oh, yes, they did. I'm sorry, they did sure, Larry Borodine, sure they did. And so they got off the airplane and we could see them outside the window through the airport window at the International airport in Edmonton forming up with the boss man on the right, the Interpreter beside him and the other fellows behind, and everybody was wearing a Russian fur hat, very typical, ushanka, yup, and they came marching into the deal, so I went up and I introduced myself in English and the Interpreter immediately translated or interpreted, and so we got together and we went from there and never looked back. And we had one of the most delightful trips. We flew them all over the Canadian Arctic. We took them out to drilling rigs and the plains area in the Foothills. We had a beautiful technical program in our Imperial Oil office building at 300 - 9th Avenue SW, or 6th Avenue, 500 - 6th Avenue SW. And we never, had beautiful luncheons and beautiful dinners in the evening. And we got to the point where the Soviets finally said, Mr. Murray you are killing us with kindness. We cannot eat anything more. We are so full. We have never eaten so handsomely in our lives.

NM: Could you Soviet speak a bit of English?

SM: No, they couldn't speak a little bit of English at all, but I had fun because in preparation for their visit I paid for my self to take two lessons at Berlitz in Russian language. So when, my first contact with the Soviets I said, good morning and how are you in Russian and during the course of their visit I kept throwing little bits of Russian at them. And finally the interpreter as we all got to know each other and people relaxed, he said, Mr. Murray, he said what are you trying to say to us? Well, I said I'm speaking good Russian. I took lessons at the Berlitz school of languages. He said well, Mr. Murray when you make your return trip in November to Moscow, he said, never, don't speak that language. He said what do you are talking to us is in a dialect of Ukrainian that was spoken 50 years ago. And he said what the people will say is you must come from the sticks as you say...

NM: So you were taught by Ukrainian teachers?

SM: So I was taught by a Ukrainian teacher who was the only person in Calgary teaching Russian at the time and darned if she wasn't the official Russian teacher at Mount Royal College. She was the official Russian teacher for Berlitz and she has contaminated more people that took Russian. My secretary wanted to take Russian and so she came quite delighted one morning and said, I've joined the Russian class at Mount Royal College and I said, describe to me your teacher and she did and sure enough, it was this lady that taught me and I said, just give up you're wasting your money. So I had to learn modern day Russian, which I did and when I went back over the Soviet Union, I kind of flabbergasted the people by the way that I could throw various phrases, simple ones, please and thank you and good morning and how are you and so on but nevertheless pleased to meet you, how do you do, and it impressed the people that I met. So we had a grand time and then we went back to, we went to the Soviet Union in November and they really put on the red-carpet treatment for us, just like we had done here.

NM: Did they check your passport and did they give you a Visa only six weeks before you went?

SM: Oh, we had no problems with that at all. There was no problems at all. We were on official government business. That first trip, we went under the auspices of Ottawa, so we were big shots in our travels.

NM: So you went to Moscow.

SM: So we went to Moscow and before we left the Soviet Union, we had covered 5,500 miles of travel into remote parts of Siberia, the Soviet Arctic North down into the beautiful country of Sochi and Krasnodar where they grow world famous tea and wines, and we were passed from one set of hands in one area to another set of hands in another area so that we never did have, like with us, I stayed with the group the whole time and I was pretty tired when they finally went back to Moscow, but they had better arrangement because they turned our group over to the people in the different areas who were bright-eyed and bushy-tailed as we arrived and yet we had just got up say at four o'clock in the morning to fly X thousand miles to some other place. So they were always rested and we were always totally tired, but we had some great times and exchange of ideas of good technical sessions, and at the end of that thing why, we said to the Soviets, well, did you see anything in Canada that you were interested in? And they said did you see anything in Soviet Union you were? Well, the Soviets had shown us 15 new ideas about drilling that we have never seen or touched at all in the history of our drilling in Canada, and we in Canada showed the Soviets a lot of things...

NM: So it was a ??? exchange.

SM: So it was a very fine exchange and out of that, we set up ongoing major projects, one for the Soviets and one for us. And we picked, out of our 15 ideas, we picked the Soviet turbo drill and we are currently still involved in the Soviet turbo drill with them as of today. We are sitting with the license to manufacture and market the Soviet turbo drill in North and South America offshore waters, United Kingdom and North Sea. And we have, that's quite an imposing area involving about 75% of the rigs in the world. So our project has gone along well The Soviets said that for their part they would like us to come to the Soviet Union and go into the Soviet Arctic North and teach them how we drill permafrost and how we organized a drilling operation in the Arctic regions of Canada.

So when we signed our first protocol certifying that they would bring turbo drills to Canada and that we would send people to the Soviet Union, why, Il immediately jumped on the plane and headed to the

Soviet Union and negotiated receiving turbo drills and receiving people to come to Canada to teach us what they know about their turbo drills and how to run them and so on.

NM: Did you find the technology in Russia very advanced?

[00:19:51] SM: Well, the old expression in Canada is what can you learn from the Soviets, they are 20 or 30 years behind us. I think that's the most foolish narrow-minded remark I've ever heard, because in some fields, the Soviets are far ahead of us and in other fields and purely because of their five-year plan, they're way behind us but not because of their technology and their technology is way advanced, and in many places surpasses us. For example, today the Soviets are drilling in the Kola Peninsula at 11,700 meters, which is darn near 40,000, which is 40,000 feet. They have the world's depth record. We've never drilled a well that deep and I doubt that we ever will but they have two wells that are solely test wells and they're ultra deep wells, so they're a pretty sharp bunch of people. And I give them full credit in drilling and I admire many of their achievements. One other major achievement is that when you pull pipe out of the ground to get the bit, the drilling bit which is on the end of the string of pipe, why, that accounts, that operation of pulling pipe, changing the bit and running it back down accounts for 80% of the rig accidents that occur which maim and hurt and crippled our people. The Soviets have nobody on the floor around the machinery.

NM: So it's a different approach.

SM: A completely different approach, and as Terentiev??, the head of the Soviet delegation said to me when we were up north and I took him up on the first rig floor, they were pulling pipe and he looked for a minute or two and he just shook his head and I said, what's on your mind, through the interpreter. He said, Mr. Murray the way you people pull pipe is, how do you say, it is like the prehistoric caveman, he said, like the prehistoric cavemen. He said, this is terrible, and he said, when you come to see us in November, I will show you what I mean. The Soviets have nobody up in the derrick, we have a direct man up there. Theirs is all automatic. There's only three people involved in handling the pipe and all of them are in a nice safe comfortable position. No exposure to cold weather or slippery, icy floors or muddy environment. and they're so far ahead of us in this phase alone that in... then another bad thing when I brought the idea back, when I showed people pictures and when I had the Soviets bring one of their top technical experts over here to tell our Canadian oil industry about automatic pipe handling equipment, I had about ten drilling contractors. In other words a very poor audience. Nobody was interested at all. And so they go on killing 17 or 20 people a year and people scratch their head and say well we tried to do our best job. Well, no, they're not because the Soviets don't kill anybody and it's a bad thing.

NM: Do they have everything on computers?

SM: Boy, they are so far ahead of us on computers that it makes your head swim. The drilling operation, they monitor 12, 14, 16 rigs in an area where the computer is in the center like the hub of a wheel and the drilling rigs are like the spokes of a wheel, out in all different directions. And they monitor 24 hours a day, the drilling operations of all those rigs by computer. They are so far ahead of us that it's sickening to see us adhere to what the Texans first started, and in Texas, they have signs in the automobile back windows, "Built in Texas by Texans". In Alberta here, we have copied the Texans completely, "Built in Alberta by Albertans", and if it isn't thought of, and if it isn't thought of by Albertans and if it isn't developed by Albertans, it's no good. So that's why we, I have introduced one thing only, the turbo drill, which has had very poor acceptance here.

NM: And why is that?

SM: And nobody else... because people are not open to new ideas. And of course, there's a bad feeling, I shouldn't say of course, but there is a bad feeling about Russia and about the Soviet Union, but I'm not proud, if I can get technology from them that I can use that results in not killing 17 or 20 people a year, I'm not that proud that I won't deal with the Soviets. And they're good people to deal with. They're honest. Once I have made, I've made, I've negotiated contracts protocols, licenses... they are fair and square. They are sharp, hard negotiators and you've got to be equally sharp with them or you'll lose your bands??

NM: That does make it interesting.

SM: But that just, I just love that. But the big thing is once they've made a contract, there is no backing out, and don't come crying to them that you forgot this or you forgot that. It's too late and they won't come... [pause in tape] "Oh, Mr. Murray, we forgot to say this and we forgot to say that", they'll never do it. So they're good people to deal with.

NM: Where do they train their people?

SM: Train them? That's another thing, heck, they've got well control schools, they've got drilling schools, they've got schools where people can't even work on a drilling rig until they've gone to the school to know fundamental mathematics, fundamental mechanics...

NM: So they practice before they can...

SM: Sure they do, you bet, and they have to pass grades because before they become a floor man, before they come become a derrick man, before they become a diesel mechanic, before they become a driller. And these people are well schooled and well trained.

NM: So November '73 was your first trip?

SM: So November '73 was my first trip and there's been 19 more of them since. And I've been to the Soviet Union 19 times. We went over there and the Soviets said, well we want you to come over and drill a well in the Soviet Arctic North.

NM: End of the tape.

## **Tape 2 Side 2 – 26:00**

NM: They have also English books to study haven't they?

SM: Oh, yes, you bet. Now what do you want? Well in regard to their studies, English is the second language and this is where you have to be very careful when you travel because don't say something you don't want the world to know because the guy standing next to you can understand you perfectly. He may not be able to speak back to you in English, but he knows the English that you're talking because he's listened to it in regard to his science studies, his medical studies, his engineering studies, geological Studies, English is the second official language of the country.

NM: Do they get all the books from the States, or...

SM: They get them from every source they can get them, they belong to all of the institutes of the world and they get all the publications of the institutes, and they are members of library chains all over the world and they get them that way too. So yeah, they're very well stocked with English books. So when I came back from the November deal, our meeting with the Soviets and I phoned Gordon McNabb and I said, well the Soviets are going to bring the turbo drills to Canada. We're going to the Soviet Union and drill a well in the Soviet Arctic North, 200 miles north of the Arctic Circle. I said, what do I do now? Where do I get the money to do this? And how do we do that? And he says, oh, well, that's up to you now. He said the whole things in your hands, you've got to form a group of interested people in Canada in order to carry this out. And I groaned I said, well hell I didn't undertake this job for life. And I said, I didn't know that I was going to have to do all this. Meantime Digby Hunt's phoning me and says the gas working group wants to send a group over, and I just got rid of the oil working group. So here I was bouncing balls simultaneously, but that's another story.

But when I came back, I then found that I had to canvas the whole of industry in Canada and say hey, we've got to form an association, have you interest in doing drilling research with the Soviets, and the principal one is their turbine drill, which we have selected as the group. Meanwhile when the group came home we made speeches all over Canada on the results of our visit with the Soviets and all the interesting things we saw, and we drummed up considerable interest and to make a long story short, I was able to get 16 companies that put in \$20,000 apiece, giving me an initial capitalization of \$320,000 and that's how we formed what is now known as the Canadian Drilling Research Association or CDRA. It was a consortium of 16 companies. And we have a charter which says that we don't have to do business only with the Soviets, we can do drilling research business anywhere in the world and with anybody we want. And so we formed the Canadian Drilling Research Association, and the first thing as I previously said was, well let's go over to the Soviet Union and negotiate the contract to bring turbo drills to Canada. And we did that and the very next year we had five sets of turbo drills, 7 5/8, 9 1/2 and 11 inch, and we had five Soviets come over here and for a period of eight months we tested the Soviet turbo drill in the field. Results from the tests were very positive and were most interesting in some of our hardest formations which are the highest cost to drill. We increased drilling rate over the rotary system of drilling by a factor of 5 and the cost per foot, we reduced by down to 1/5 of the cost per foot. So they were very positive results and from that we defined a couple of things that we wanted the turbo drills to be able to do, and the Soviets said we can do it. So they went back home and we never heard a word from them until May of 1979. This was in a working protocol of June of '76 and May of '79. although I had dogged them continuously for progress reports of which we got no progress reports, why, finally in May of '79, they said come on over we're ready to show you the turbo drill you wanted. So we send a delegation over and saw the turbo drill and it seemed to have everything we wanted and so we, shortly thereafter commenced negotiations with them to bring those turbo drills to Canada and field test them here. And so we signed a purchase an option agreement to do that. And so that was that. So the turbo drills arrived and we've been testing the turbo drills.

In the meantime, we worked out now a licensing agreement and we have what looks to be a pretty good legal side of things on their turbo drill and if things work out and are as positive as the test in '75-'76, this could be worth quite a bit of money to us. So with the test run and everything the Soviets suddenly woke up to the fact that I had got my part of the deal. I had brought turbo drills to Canada and brought experts to Canada to teach us, they'd better start organizing their Arctic well, or they wouldn't get their share of the proceedings. So they said, well come on over, and having seen their drilling rigs which are definitely inferior to ours in many respects why, I said, well, we can't really demonstrate our techniques

without Canadian equipment. And you guys will have to buy Canadian drilling equipment so that we can demonstrate our expertise. So to make a long story short, I sold them 9.9 million dollars worth of Canadian drilling equipment from 27 manufacturers in Alberta, which was a tremendous business deal. And for the next year. We had five Canadians in the Soviet Arctic North continuously supervising and recommending to the Soviets drilling procedure and practice.

NM: On the training process, do the Russians have only exchanges with Canada or also with the States?

SM: Well, the States never have made headway with them and the States have had a drilling group go over there. As a matter of fact one of our people from Exxon production research was on the group that went over but the States have never made much headway with the Soviets in sales of drilling equipment and exchange of technology. So we're really the only people that made that contact and have stuck with it. At the same time out of all of the working groups that were first formed in 1972 just after Trudeau and Brezhnev signed their historic document, why, I'm the only, I'm the only group that is still alive and active and I'm an enigma to Ottawa because they can't figure out how I do it.

NM: Do you have to go in and report to Ottawa very often?

SM: Oh, yeah, we have, we have semi-annual and annual meetings and Ottawa has helped me a great deal by supplying interpreters because I don't go over there without an interpreter. And so Ottawa supplied me at no cost, interpreters. So yeah, I've kept the whole system going and Ottawa got very one-sided about it and wanted to shut the whole thing down and I said, well look you created this pregnancy and created this child. Now, you've got to, you've got a responsibility here in until we shut things down. And so they've abided by that and they've played ball with me and we've had a good relationship. So we had all these people go over and that was the most fantastic operation because I was a, I was like a travel agent. I was, I had to get tickets for all these people, plan all their itineraries, interview all of them on how you behave in the Soviet Union.

NM: And because the rules there are very strict...

SM: And I had to pick good capable people with expert, one of them having expertise in drilling fluids and another a good drilling engineer, and another a good something else. And so we had quite a thing but for example, ATCO, who had tried for years to get into the Soviet Union and never made a dent; in my package to the Soviets, I sold them an 80-men camp that was worth some seven or eight hundred thousand dollars and that was a good sale, but the mistake that all the companies made was that after you, after I'd made the sale and I'd put together shipment of all this stuff to the Soviet Union, I was involved up to my ears in every phase of it. Why, the companies wouldn't make any follow-up. Normally when you sell somebody the first time, you go back and say, hey, how do you like my product and... but things were too good in Canada, and they said why should we go try to foster a market in the Soviet Union when things are so good here. So they were so stupid that now things are bad and things are slow and there are but very few rigs operating in Canada and everybody's crying the blues. If they had used energies to have developed the market in the Soviet Union, they could have been busy to this day. So once again a case of Canadian business stupidity.

[00:13:05] Are you planning to go back soon to the...

SM: Well I don't know, right now the turbo drills are being tested in Canada and the action is here. So I don't know whether, when I'll go back and I retire from Imperial oil in November of this year. The Soviets have asked me if I will consult with them in their negotiations with Western people and I've told them that I would and Ottawa's asked me if I would consult with them on why I'm successful in doing business with the Soviets, and so maybe I'll get back to Moscow again before long. But meanwhile, we've had a very long and successful, most frustrating and everything, but extremely, the name of the game is interesting to me and challenging to me. I've learned a lot of things in in my business dealings with the Soviets and I found out that they're good people basically and fundamentally good people. They like people, they have a warm feeling for people, they like the, cultured like nobody's business: music, art, ballet and so on, and it's been a great experience.

NM: Looking back at your career. Mr. Murray, what was the most exciting experience in the oil patch?

SM: Well, that's a hard thing to answer because as far as I'm concerned every single day is a great new fascinating experience. I wouldn't trade one day of my life for any other day or would I want to change any part of my life if I had control of it. I wouldn't change one part of it. I have enjoyed my life more than what, as a young boy. I ever thought it would develop into. My work has been fulfilling, I have made many contributions in drilling of a research and development nature, I have lectured and transmitted knowledge that I've developed to help my fellow man, I've traveled all over the world which was an objective and a wish from boyhood. I've never met a bum person in any country I have visited. I've loved every peoples that I have encountered in the world from way up the Amazon to the heart of the Libyan Egyptian Great Sahara Desert, from the jungles of many countries to the wild open spaces of Siberia, and I have found all people are children of God whether they are supposed to have religion or not, it is there and God is there.

[00:16:22] I have forgotten to ask you about your publications.

SM: About my publications... well publication wise I've published over 200 technical papers, I've made technical speeches to all the major technical societies in the United States and Canada. I have been participant in many, in several, in several patent applications and in research and development, I have contributed many new ideas to the art of drilling. Someday I may get, I wrote a book on compressed, on drilling with compressed air, that was quite a job to do. I would like to someday write either single articles or a book on my travels and my experiences because to record them for good would be mighty interesting because of all of the various conditions that I have encountered in my travels from way back in the desert areas of North Africa, to the jungles of Sumatra and the wilds of the Malaysian area and all over the world. And I've got some marvelous experiences that, coupled with the slides that I have, some 34,000 of them, I think I can make a pretty good book. The National Geographic has encouraged me to write an article for them on my experiences on this remote island of Zakynthos in Greece where we were drilling a well and now I may get time to be able to do that. So does that answer your question?

NM: Yes, thank you. Who was the most influential persons in your career?

[00:18:36] SM: You asked a very good question and I compliment you on asking it because no man goes through life without the help of and influence of many people and more particularly a few that you could count on the palm of your hand. I think the greatest contribution to my career started right in my home with my parents who brought me up to love people who taught me to use my eyes and see, who taught me to listen, and who took me into nature and showed me the beauties of nature and stimulated an undying interest in history, archaeology, geology and just nature - flora and fauna and so on. So my

parents have to be number one. Now then, from the standpoint of guidance and help, a chap by the name of Ward Tennis directed me that at a fairly middle late age that I should go to university. I thought I was too old to go to university but I found out I wasn't and I came out an honor student.

NM: How old were you?

SM: I was, let's see when I finished University I was about 27 or 28, and that's when I went to Venezuela. And another person in Imperial Oil or two people in Imperial Oil who have influenced my career, and they gave me the opportunity, they used to laughingly say, give Scov a job and then get out of his way, leave him alone, and you'll get a good job done. And I have enjoyed this throughout my whole career with Imperial, and the two people I would name in Imperial are Tip Maroney and Walt Dingle, both of them encouraged me at times when I needed encouragement. They gave me every opportunity to do my job, and that's all I needed was the opportunity to do the job and get out of my way. Another third chap, naming a person directly is George Bannatyne, who was an absolute man of men and I shall never forget the beautiful and great contribution that George Bannatyne made to my life. So those are three men that I have named and my parents.

NM: What do you consider the highlight of your career?

SM: Well, I thought I'd answered that a few minutes ago, but when you look back on it, the fact that the government of Canada wanted me to work with the Soviets and that I've done it since 1972, that's 10 or 11 years, that was a high honor to... why'd they pick me to be head of the drilling subcommittee. So that was a very thrilling thing and a high honor to be chosen. The fact that I was chosen from all the thousands of engineers and Standard Oil of New Jersey has in its affiliates and everything to set up a well control course, I thought that that was another highlight and then to be able to travel all over the world and lecture and meet all the people, I didn't have all the experiences I had, that was another highlight and then when I was chosen to, or invited by Jersey Production Research Company to go to Tulsa Oklahoma and write a textbook on air drilling and then to travel all over the world studying affiliate operations, that was, to see applications for air and then also to solve their drilling problems by troubleshooting, that was a high honor. The fact that Imperial Oil had the vision and the foresight to say that look, drilling is not a function of brawn and muscle and bulldozing your way through, drilling is a science. Let's form a drilling engineering group and let's get engineering into drilling. It took a forthright man and some selling to management, because as I have said before I was the first man of a breed, I was the first drilling engineer in Canada and I set the stage and I showed two other companies that drilling engineering was good and thus other companies set up their drilling engineering deal, but the start of the whole thing was right here at Imperial Oil, and Walt Dingle had a great deal to do, and so did Tip Maroney, with the setting up of me as the first drilling engineer in the company.

NM: I have noticed that oil people go on working even after they retired, you are planning to do some consulting work. Is there anything else you're planning to do?

[00:24:37] SM: I've got so many things that I want to do. I'll never have them all done by the time I die. I want to travel, there's places I want to go. There was one time when the prime object of my life was to go, was to see Machu Picchu in Peru. Now, I've got other places, I've been there and enjoyed it. It was everything I thought it was. Now I have other places that I want to go to. Most of the things I want to do are related to history and archaeology. And so I have, I'll never run out of things to do that I want to do and will do and as long as I'm blessed with good health why, I'll get out and do them.

NM: This is the end of the second interview with Scov Murray. Mr. Murray, thank you very much for this fascinating interview.

SM: It was my pleasure.

End of interview