BOEM DEEPWATER GULF OF MEXICO HISTORY PROJECT

OFFSHORE ENERGY CENTER HALL OF FAME

Interviewee:	Leon Vincken
Date:	September 24, 2011
Place:	Houston, Texas
Interviewer:	Tyler Priest
Ethnographic preface:	Leon Vincken was educated in the Netherlands in mechanical engineering, and joined Shell Oil in 1955. Vincent was immediately sent to Venezuela, where he spent the next decade of his career. Upon returning to Europe, Vincent was assigned to the research section of Shell, on a p project working to determine the ultimate depth limit of a human diver. Two and a half years later, Vincken was dispatched again—this time to the South China Sea. Come 1975, he returned to The Hague to head up Shell's offshore research group. Vincent retired from Shell in 1989, and began his own senior management consultancy firm, before joining a commercial bank.

TP: This is an interview for the 2011 Hall of Fame induction with Mr. Leon Vincken. It's September 24, 2011. The interviewer is Tyler Priest in Houston, Texas.
Congratulations on being inducted into the Hall of Fame.

LV: Thank you.

TP: Why don't we just start by having you tell us a little bit about yourself. Where are you from and how did you end up in this business?

LV: Okay. Well, to start out, I'm a Dutch citizen. Also half of that is Belgian. My mother was Belgian, but I had Dutch education at Dutch University, graduated in 1955.

TP: From what university?

LV: Dutch University. I graduated in mechanical engineering. After my military service, I immediately joined Shell.

TP: What year was this?

LV: That was ’55. I did two years’ military service, ’53-’55 and was sent to Venezuela after a fairly short training, because they needed lots of people in Venezuela. I spent ten years in Venezuela, my first year at Venezuela University at Caracas because I was [unclear] Spanish speaker and also a Dutch speaker [unclear]. I completed my knowledge of the Spanish language, which was very helpful for Shell and for myself. I was mainly involved in those years in the operational side, of course, as a young engineer, both on the engineering side and pure operations on [unclear] onshore and offshore.

After ten years I got transferred to the research section of European Shell, research section, whereby we had a very interesting program of finding out how deep we could go as man into the sea, and that we did together with the United States Navy, some professors at the University of Zurich, a famous Swiss, he was called [unclear], and he did the first dive to 300 meters here off California, with a guy called—what was his name? Metzinger [phonetic]. Unfortunately, of the two, Metzinger never came back. We lost him in the process, which was very tragic.

But anyway, from that program onwards, we started to conduct trials in [unclear] atmosphere at Zurich and thereafter in the Mediterranean. We built a submarine called *CapShell* [phonetic], which very few people are familiar with. It was in the year of the yellow submarine [unclear] and we called it the yellow submarine [unclear], a big—rather like [unclear] the French have, the facilities with different pressurized compartments, where we could also [unclear] people out into the sea.

That program we set up because by the mid-sixties we saw that the extension of man into the sea and the lack of reliable electronic equipment would need us to put man down at the sea, and because you can use only a few hours people under compression in deep water, we had foreseen that we would have facility at the bottom of the sea. Sounds very outlandish now, but at the bottom of the sea, and we would have people and engineers living together for one week under pressure at the bottom of the sea.

Our first project was in Malaysia and Indonesia in deep water. Deep water at the time was 600 feet. And they would live there and go with the submarines to their work at different facilities at the bottom of the sea. That program I was project leader for two and a half years after spending some time with the doctors in Zurich on the capability of the human body, which was most interesting.

After that, after two and a half years, we completed that program and made it operational in the South China Sea, where I was sent off where? To the South China Sea. [laughs] At that time in operations again, so I had other operations now that came off this research program. That lasted about a year. By then it was beginning [unclear] electronics, etc. We were moving into a different

area, also thanks to what we got from the space industry, so the need for people at the bottom of the sea was not necessary any longer, so we abandoned that program, and that got on to the program of more sophisticated facility bottom of the sea [unclear] on our side, and we installed in the South China Sea prototypes of [unclear] subsea [unclear] with workover capability and also a very [unclear], of which only one has been installed. I'm very proud I was the initiator of it. We never made money on it.

Off Holland we had a shooting area in shallow water for the Air Force, but we also had an oil field there, which we couldn't properly develop. So with [unclear] at the time, we made a design of what was called an [unclear], where we put the whole shooting match within the casing, protected, so the big casing and the whole tree [unclear].

TP: Christmas tree.

LV: The Christmas tree went inside Mother Earth. One of those was built and installed and operated in the South China Sea, but after that, the need wasn't there any longer. I don't think we ever got the concession. [laughs] But at least that was a very interesting project.

TP: Were you working on completion of subsea wellheads at the same time that Geer and—you were working on it simultaneously?

LV: Well, the difference was that they very much went out to the one-atmosphere chambers. I forgot the name of who [unclear].

TP: The Lockheed system.

LV: Lockheed system. They believed in the one-atmosphere system. We didn't believe in the one-atmosphere, so we [unclear]. And of course, at the end when you put them together, it was very good we did two programs. So the Lockheed never took off and ours took off. It could have been the other way around, of course.

Now I'm speaking—I went in '67, I went to the Far East. I was there also for a lot of things, [unclear] of liquid gas, etc., and in '75 I was moved to The Hague as head of offshore research. That, of course, was very exciting because by that time we had encountered smaller developments, smaller oil fields, gas fields that could be developed the proper way, either [unclear] deepwater or the economics were against it, and that's where the idea originated for the floating system.

Now, the floating system, of course, isn't an invention, but what we had at the time, we had high-pressure hoses, we had [unclear], we had difficult components [unclear], so what I did, looking at it, because researchers, you always have to be careful, they're very nice people but they go on with the same thing, they go on and on and on, so you have to pick one and say, "Well, this is

it." So my contribution was that I saw all these things being researched, and we had several products that were almost ready. One example, the high-pressure hoses manufactured by [unclear]. We developed those with the French and we had a license that we have royalty on the product.

But when we had a discovery in the Mediterranean, the [unclear] discovery, it was, (a), too deep; (b), too small, because those were the two criteria. And, of course, the economics were against it. So I was, by management, asked, "You guys have been doing research, cost a lot of money. What have you got for it?" So we put all these pieces together and say, "Well, they should work," and that's, of course, what I did [unclear]. I had to go twice to London to the board, because they didn't believe it. They asked me all sorts of technical questions, economic questions. But in the end, we got the green light to go ahead.

That's when other guys came in, like my chief engineer was Frank Hicowd [phonetic] at the time, who passed away. [unclear]. John Carter came a little bit later, and we had two guys from [unclear] and—the name escapes me.

TP: [unclear] on the citation.

LV: They will be here this evening as well.

So you never do anything alone; it's always teamwork, of course, but I sold the idea to management and then the other guys came in and we started developing the whole thing. That's how this came about. It was very simple. It was a small ship. It was only two [unclear] at the end. The turntable was, from a technical point of view, very easy to construct it—not at the time, but now[unclear]. It was a simple system.

From that system, and after we were done with that, we were asked by the Italians [unclear]. We had a 50-50 deal with [unclear]. That was about [unclear]. Then we got [unclear], which John—

TP: The Nilda was [unclear].

LV: Nilda was [unclear]. [unclear] was Tunisia. Every time it took a more complicated step, because [unclear] had more wells in the vicinity, [unclear] wells, etc. For a rather long period of time there was silence on the market, because we were very early with these systems, and it took between seven, eight years before it really took off. Now, of course, you find them all over. We have leases in the system, leases for fifty years, very good income.

TP: So they lease complete [unclear].

LV: Complete lease to the Brazilians and Malaysia and—

TP: How long do the leases last?

LV: Fifty years. I'm still in contact regularly with [unclear] because I had a few more ideas. One of them was liquid gas, which is now [unclear].

TP: Yes, floating LNG.

LV: Big floating LNG [unclear]. Now, I would have built the vessel in concrete. That was my idea, reinforced concrete, but it has become so enormous that now they're building it out of steel. On the other hand, [unclear] probably be installed between Indonesia and Malaysia. I haven't been involved at all, but I had that idea ten years ago, and I discussed that with the then director in Monaco [unclear].

TP: Ten years ago you had this idea?

LV: The idea, yes. And he did that about three years ago. He put a team on it to start looking. So they were a little bit ahead, but Shell decided to look at can we do this. David [unclear]—he's now gone—[unclear]. In fact, there is another one [unclear]. Lost a lot of money, two projects, but they now have another one, and they do a lot of work for Shell on this [unclear]. So that's really been my involvement as a researcher, but I'm not a researcher, because I'm a practical man who makes research work [unclear]. Researchers are the chaps that really look at a fairly narrow field and decide that out. That's never been my [unclear].

TP: But you need an interface between research and the business.

TP: Exactly. I've had that as head of Shell research on several other things. Automation of drilling has been one of my favorites. In fact, [unclear] build another one, and that's where you still find a separation between the American also drilling in the sea, European drilling in the sea. They tend to go too much their own way. It also has a bit to do with engineering [unclear].

TP: Automated drilling?

LV: Well, as you probably know, a drilling rig has twenty people around to do all sort of things. You can't do away with that. Pipe-handling, for instance, you don't need anybody. You can do that hydraulically. The company who built the rig was a German company, Deutag. They were taken over by Preussag, another Germany company, and the German company, Preussag, they have been taken over now by a British drilling company. I think it's called KBC, and they carry on with it. The result is that you only have about four guys on the floor [unclear], so there's an enormous reduction of man [unclear] potential.

TP: These are semisubmersible drilling or any kind of drilling?

LV: I've done that for Landrick [phonetic] only, only for Landrick. It can done, of course, on an offshore rig. It's no different. It can be done. And then, of course, the other thing is the technology of the rig itself. I'm not in the business. In fact, I've stopped working. That's another subject, slim-hole [phonetic] drilling. We make a big huge hole and haul all that earth, Mother Earth, and then we put big pipes in it. You should reduce your pipe size, your hole size. It's much cheaper. That is being researched, but I don't know where that stands at the moment.

TP: So these are two areas that you've been—

LV: Those are two additional areas. I got some patents on that as well, but that's not important. Patents are there and after ten years [unclear].

TP: How long were you the head of EMP Research?

LV: 1975 I came back from the Far East, until 1981, and in 1981 I moved back into [unclear] and I was head of operations worldwide for all Shell operations, Dutch Shell.

TP: Can you talk about the relationship between E&P Research in The Hague and E&P Research here in the U.S.? Because there was this minority shareholding question that kind of—

LV: Yes. Well, [unclear]. That was, of course, the reason we had two Shells, but let's talk about the people and the work and how we worked together and didn't work together, because there were two sides on it. First of all, you should not forget—well, even here in Texas you have Texas A&M, the Aggies, and you have the other universities. Already you know what that means. It's like a lawyer, when a lawyer meets another lawyer. In the first place, he goes back to his own university. Now you can imagine if we have [unclear] United States. That's even worse, in a sense. At the time, of course, the Gulf of Mexico development, Shell Oil was far ahead of us guys in The Hague until we started to go into deeper water in the North Sea. Then we started to catch up. We had the Spar. I don't know whether that means anything to you.

TP: Spar. Oh, yes. Brent Spar.

LV: So we had two very strong [unclear] production research teams. What we had—where Geer comes in--twice a year we got together in The Hague or here in Houston, and we discussed our separate research programs, and we had a very complicated system of attaching percentages to each other's programs. So we would say, "This program [unclear]. We have a 20 percent interest." And they would have an 80 percent interest in something we had. The best example is they were not interested in floating systems at the time. They were very much working on tension leg, some [unclear] on tension leg. We did much more on what can we

do, how far can we go with the floating system. But that was on the whole program.

There was also on the exploration side we had different programs, but we called that harmonization programs. [laughs] That didn't always go very well. Sometimes we had to have a good evening and a good meal and a few glasses to get back to the track the day after. But on the whole, it worked very well, and I found that quite natural. At the time, sometimes we complained about it, but on the whole, it worked very well, as I said. For instance, on the subsea well development, Shell USA going for the one-atmosphere chamber, us going for the wet systems, in the end it came all together. So on the whole, it worked out, as I was head of the harmonization team, we spent very pleasantly. [laughs]

TP: Were you involved in the development of the Spar concept?

LV: No. Very little. Not with Spar itself. What we did was [unclear], but that was before I became head. Spar was done before 1975. When I came in, we took Spar, the chap who worked on Spar, did a lot of work with Jerry Graf, [unclear], and what we did, we carried on and we [unclear] a storage Spar to a production Spar [unclear]. We had storage. We could offload [unclear] system and now [unclear] Spar developer. That study was done in The Hague, and not so much supported by Shell Oil, maybe 20 percent or whatever, because they believed much more in the tension leg, which, well, we have seen now is in operation. A production spar has never been built, also because we had a lot of political problem with the Spar unit itself, [unclear], etc.

TP: The [unclear]. The disposal of the [unclear].

LV: [unclear] further development.

TP: Now Shell has this Perdido Spar out in deepwater.

LV: Yes, yes.

TP: That's state of the art.

LV: Yes, but you see, also we had different opinions and sometimes small clashes, and again, it was very good to have two research teams working and getting together every now and then.

TP: But it happened within the United States, too, because you had Geer and [unclear] on the *Bluewater*, Rudac, and on the West Coast you had Howard Shatteau [phonetic] and the others on a [unclear].

LV: True. Absolutely true.

TP: I think it was deliberately so, to get these two different concepts going.

LV: Yes. Well, I spent a lot of time here in Houston and also on the West Coast on other things like the [unclear] project, and we had, of course, [unclear], and that is still within Shell going on. I had a lot of contact coming here now with a chap who is the assistant to number two at Shell in The Hague. He's a Nigerian. And the [unclear] thing, I think, is the best thing Shell had ever done at the time on research, because [unclear] people from my research side to USA and from here [unclear]. Again, that worked very well. We had—I forgot his name. We had a pipeliner here. He's quite old now. [unclear].

TP: Carl Langner [phonetic]?

LV: I know Carl Langner. No. He worked [unclear].

TP: All of them, it seems, have spent time time in The Hague.

LV: Yes. Carl Wickizer. Is he still alive?

TP: No, he died. He died probably five years ago.

LV: Well, he had a [unclear] problem.

TP: He was big in developing the tension-leg platforms.

LV: Yes. Carl, excellent guy.

TP: He was one of the chief production engineers for Shell's deepwater. I interviewed him and spent some time with him [unclear].

LV: I know Carl. Great guy. [unclear].

TP: Oh, yes.

LV: Nice chap. So does that answer your question?

TP: Yes.

LV: We had problems now and then, but on the whole, looking back at it now, it worked very well.

TP: You said you were the manager worldwide for Shell offshore?

LV: Operations. Shell Operations and also [unclear] New Guinea, etc. So I spent several years traveling the world.

TP: What a perspective.

LV: Yes. Well, just speaking for myself for a moment now, I think I've been very fortunate that Shell allowed me or put me in these different things, which very often you have your career as engineer, chief engineer, etc., but I did many different things. I was captain of a submarine, the first captain of a submarine as a young [unclear].

TP: Wow.

LV: That's fascinating that a company like Shell gives you those opportunities.

TP: Just the whole idea for—and this was in vogue in the sixties, that you would have people living on the seafloor.

LV: Absolutely. And I was trained as one of the first ones, because we had a joint venture with a [unclear] company, a big salvaging company but a lot of submarine diving capabilities, and together with them, two Swiss doctors who had a lot of experience on decompression. We developed a decompression table. Now we use, as [unclear] table, they're still being used by the divers because you couldn't use the American Navy [unclear].

A fascinating time. Of course, the sixties were fascinating and the seventies. Now we are facing all these other problems: unemployment, banking crisis, the oil price going down. It makes you think sometimes the world has to solve a bunch of other problems before these things, these simple things like research and [unclear] come up again.

TP: Speaking of oil prices going down, so you became head of Shell Operations when the oil price was collapsing in the mid eighties, right?

LV: Several times, yes.

TP: That must have really affected the global outlook.

LV: One of the worst things, you had to pay off people that you really didn't want to pay off, and half a year later we had to take them back on, because, you know, in those days the crisis went deep, sharp, and came up very quickly. You had to ask, "Will you still come back and work for us?"

TP: One of the things you hear about the industry is there was this period where, yes, they were hemorrhaging personnel and the exploration function sort of atrophied, and they weren't looking as hard as they had been at one point. So then we get to a point where they're getting tight supplies by the late nineties, early 2000, but

now again it seems like everywhere you turn, there's some spectacular development.

LV: [unclear], completely different. So I still have now and then, I get a briefing of what's going on. These companies like [unclear], they've changed completely, 100 percent. Not the same any longer.

TP: Shell is certainly different, Royal Dutch Shell. It's one unified company.

LV: Particularly after we had the crisis of the [unclear] reserves, which should have been [unclear] crisis because in the end, that was a storm that was a glass of water [unclear], because it was misinterpreted and misprinted, but in the end, it was just a ripple. But it affected Shell, of course.

TP: Yes. All those reserves will probably be added on, if they haven't been already.

LV: Yes, absolutely.

TP: So what year did you retire from Shell?

LV: I retired from Shell in 1989.

TP: So fifty-five.

LV: Then I started my own company as a senior management consultancy, and that was fascinating too. I started as a—well, first as an interim director for a company, international company in Belgium. That had some interest because I had to change the thinking of the company [unclear] interview. But after that I did two and a half years' consulting myself for [unclear], a big German company, and I looked at all the companies [unclear], companies here in the United States, the efficiency of the company, should they sell their [unclear] gas fields along the Mississippi River, which they have, but they did it a little bit late.

TP: The gas plants, you mean, or gas fields?

LV: The gas fields. They had oil fields and gas fields along the Mississippi, very old wells, very little pressure. The gas price, of course, never moved in the United States. The gas price has always been bad compared with the oil price, which is different in Canada. So my advice was to sell, and they have sold. The only thing was that one of the chaps at the top of [unclear] had bought those fields. [laughter] I wasn't very popular for a while [unclear] but I was right in the end. [unclear] kept it [unclear] and other places.

Then after that I joined a banking company, a [unclear] banking company in Paris, Lazard Freres, big commercial bank, real big [unclear]. We had a team there of about six people, BP, ex-BP, ex-Shell, and I headed that team for a while.

We had one and a half years consulted to [unclear], the Minister of Oil and Energy in Moscow, and that was under Yeltsin's time. But then Putin came and quickly changed everything and we weren't popular any longer. [laughs]

Then I joined [unclear] Dutch Bank, not on the banking side, also on the energy side. I did some projects for them, reviewed a project in Argentina, Ecuador. That had to do with investment, look at the company, is the company [unclear], what about the load, [unclear], and I did that till 2001.

By that time, why, my wife passed away in 1998, who had been with me all those years in all those countries and very much supported. I was alone for five years and then I met in 2002, about, I met a companion, which is here with me, who will be with me.

TP: You said your son works for Shell now.

LV: My son works for Shell, yes. He's been full-time Shell twenty years at least. He enjoys it as much as I did. This is the amazing thing, because also the company has changed and it's different in many ways. It's not as paternalistic as it used to be. Like if you make a cut, the Shell blood comes out. And that's amazing. So I think it's still a good company to work for, like Exxon, like BP, I think, because I had a lot to do with Exxon. Excellent people. Excellent people.

TP: Is there anything else you care to share with us?

LV: Well, I hope to share a few drinks with you this evening and a good meal and see some guys I haven't seen for many years. Otherwise, it's a pleasure to talk about the past.

TP: It's great talking to you. I think we can probably end here. Thank you very much, and congratulations again.

[End of interview]