Interviewee: Homer "Frank" Frankhouser
Interview: October 10, 2009

BOEM DEEPWATER GULF OF MEXICO HISTORY PROJECT

OFFSHORE ENERGY CENTER HALL OF FAME

Interviewee:	Homer "Frank" Frankhouser
Date:	October 10, 2009
Place:	Houston, Texas
Interviewer:	Tyler Priest
Ethnographic preface:	Frank Frankhouser attended Lehigh University, where he earned a degree in civil engineering before serving as a company officer in the U.S. Army in the Korean War. Come peacetime, Frankhouser signed on with the Dravo Corporation, doing heavy civil construction and engineering. When Dravo expanded into the offshore business in 1969, Frankhouser was tapped to be the vice president and general manager of Dravo Ocean Structures, newly established in New Orleans. In 1972, he joined Brown & Root, and was soon sent to London to help manage the Forties development. Thereafter, Frankhouser managed the major Stratfjord-B project. In 1989, Frankhouser returned to the states, and retired in 1992.

File 1

TP: This is an interview with Mr. Frank Frankhouser on October 10, 2009. My name is Tyler Priest. We're in Houston, and this is for the Offshore Energy Center Hall of Fame induction for 2009.

Congratulations. We'll just start off with a little background. Tell us where you're from, where you went to school, and how you got involved in this whole business.

FF: I was born in Reading, Pennsylvania, and went to Lehigh University, bachelor of science degree in civil engineering, and then I went in the army in the Korean War, the Combat Engineer Battalion, as a company officer. Then when I got out, I went to work for Dravo Corporation out of Pittsburgh, heavy civil construction and engineering.

TP: What kind of projects were you working on?

FF: Bridges, locks, dams, so forth. Towards the end of my stay with Dravo, they and I decided we were going to try and get in the offshore industry. So we set up a subsidiary company called Dravo Ocean Structures, and I was vice president and general manager. We had an office in New Orleans.

TP: This was in 1970, around 1970?

FF: Yes, '69, '70, '72. We had an opportunity to get some proprietary work from PMAX [phonetic], to strengthen some existing, older and existing steel structures using pre-stress concrete in the legs. And also we formed a joint venture with a French company, Ocean Structures of France, and they and we were involved in the first prototype articulated tower. It's a 200-foot long sub cylinder, and it was installed in the Bay of Biscay in France, and successfully. So that went well.

Then we bid work with another French company called Ocean Structures of France for, again, a concrete offshore storage structure, and we bid for the Ekofisk oil storage, which we didn't get, which went to C.G. Doris. They did very well with that.

TP: So you were specializing in pre-stress concrete structures?

FF: Yes, with ocean structures. Then I left Dravo, and [unclear] by Brown & Root, and joined Brown & Root in '72. I was only with them a short time in Houston when they sent me over to London to be the deputy project manager in BP Forties project. I did that job for a year or two, and then

my boss got promoted and I was a senior project manager for the remainder of BP Forties.

TP: Tell us a little more about the Forties project.

FF: Forties was four platforms—actually it was in the *Guinness Book of Records* as the deepest offshore platform, which is kind of unusual nowadays. That was 420 feet. Now they're going down a couple of miles in some cases. But at that time it was kind of a revolutionary structure.

TP: Big structures, yes.

FF: Heaviest modules every lifted, 2,000 tons. Now they're 14,000 tons.

TP: Brown & Root had those big construction vessels that they sent over there.

FF: We did. That was interesting. The one we had, we designed the modules, and it ended up some of the modules were too heavy for our lift barge, derrick barge. So we had to bring in Heerema to lift our own design. But that went quite well. When BP started that project, oil, I think, was only $2.70 a barrel, believe it or not. That was in the seventies. By the time we finished the four structures, it was $15 a barrel. BP was worried about making money, but they did well. At the end of the day, I think it was a couple years ago, they sold what was left of the Forties to one of the smaller American companies. And then at the end of Forties—do you want to know more about Forties?

TP: Yes, I do.

FF: Four structures, deepest water at the time.

TP: Now, who were you working with? Who were some of the people from Brown & Root that you worked with on this thing?

FF: Bill Stallworth, he was back in Houston, that was my boss, and a couple of others. Roy Jenkins. He's passed away. [unclear] in this whole thing. Well, no, wait. There was Jay Weidler. He was back in Houston, and he helped design the actual jackets. We did the design and project management of the Forties, by ourselves, no joint venture, which I found out later is a real advantage to [unclear].

TP: Yes, Jay was the one who headed up the history project for Brown & Root.

FF: Yes, right. Nice guy. I think he's retired now. I'm not sure. He might still be consulting.

TP: So after the Forties you moved on to the Statfjord-B development?

FF: Statfjord-B, yes, that's the project directly—that was a big, big project, two billion dollars, which was a lot in those days. BP Forties was about one billion.

TP: And you were project director, right?

FF: Right. That was a joint venture with Norwegian Petroleum Consultants, which was also an internal joint venture in Norway, with ten Norwegian engineering construction companies, [unclear], and so on, a whole bunch of others, who had never ever worked together before, 50 percent Brown & Root, 50 percent Norwegian petroleum consultants, and it was a management challenge.

TP: Thrown together on this [unclear].

FF: Yes, by the Norwegian government, and the client—there were ten client companies, including Statoil and Mobil. Mobil was the operator. Statoil, Conoco, Exxon, Esso then, and a bunch of other oil companies. So we had this conglomerate of oil companies and conglomerate of Norwegian engineering companies, and we were Brown & Root. So it was quite a challenge, but we managed to get along well, after some difficult times, but we ended up being on budget and on schedule at the very end. So it was quite an experience. Again, that was in the *Guinness Book of Records* as the heaviest floating concrete structure, Statfjord-B, which is superseded by now.

TP: Yes, by the Troll and some of those others.

FF: Troll was in deeper water. We were 485 feet.

TP: Why did they select a concrete structure for that at the time?

FF: Well, Norwegian Contractors, which was made up of Aker [phonetic] and a couple other Norwegian companies who were specialists in concrete, and the Norwegian government was interested in getting work and succeeding. It was already decided before we got the actual job, but right at the very beginning of the job we were awarded the project on a Friday afternoon, and then that following Monday the government said, "Wait a minute. We have to study this job because you're putting everything on one structure, and we're worried about having a fire, of people getting hurt

and dying. So you're going to have to study that for another year." So we did. We studied various concepts, separate platforms, some steel, some concrete, made the full circle, and came back to one platform again by putting in firewalls between where people were and these combinations. So they finally accepted that, and then we get on with the job.

TP: So I see you say that over a thousand project personnel and ten thousand construction workers. That's a huge project.

FF: Yes, right, and most of the construction—let's see, it was done in Norway. Yes. Right. Norwegian Contractors had a fabrication yard and a graving dock, which was an interesting thing in itself. Aker did a lot of the module work, as I recall, and Moss Rosenberg [phonetic] fabrication yard did a lot of module work.

The modules were assembled on floating barges in Bjornstad and Stavanger, and these were taken out, and in the meantime, the concrete structures, which floated out of a graving dock in Stavanger, and they were taken up to a deep fjord. The concrete structure was ballasted down, and the barge with all the modules on it was floated over. The concrete structure was de-ballasted and came up under the modules, lifted them up and they were mated, and that was the final product.

TP: Wow. That's a touchy thing to do in the middle of the North Sea.

FF: Yes.

TP: So you were in London for a good part of the 1970s, right? I guess you were over in Stavanger for a while then?

FF: No, I was in Oslo. Actually, the project office was in Oslo.

TP: So that project ended around 1981, is that right?

FF: 1980. Ended for us, yes. Then I went back to London. Then I was deputy chairman, ended up being chief operating officer as well for all of Europe and Africa for Brown & Root U.K. at the time, but it was also Brown & Root.

TP: Can you tell us a little bit about the work you were doing in Africa? This was after Cabinda [phonetic] Gulf, right?

FF: Africa, yes. We bought an engineering company in London called Howard Humphreys, and when we bought them, they had an office in

Kenya, Nairobi, Kenya. That was part of my little empire. I went down there, but they weren't doing any offshore work.

TP: So the African work wasn't offshore at this time.

FF: Not at that time.

TP: Yes, I guess it probably didn't come till later. I mean, there was the early Cabinda Gulf offshore work that Brown & Root did, but that was back in the late sixties, I think, right?

FF: Well, Brown & Root was one of the first ones in the North Sea. I wasn't over there then. I think they put in the Viking pipe or gas field. Dick Wilson was in charge of that at the time.

TP: It also mentions here that you were involved in the Conoco Hutton project.

FF: Yes, that was interesting. That was the world's first tension-leg platform. Conoco wanted to try it out in relatively shallow water.

TP: Do you know where the idea for the tension-leg platform came from? I guess a lot of people take credit for it, but—

FF: I think Conoco engineers. There was 485 feet of water, and they wanted to see how it would work, and we, Brown & Root, did a lot of the design work and also fabricated the hull section. We got the Queen's Award for that work.

TP: Where was the hull fabricated?

FF: In Highland Fabricators.

TP: Highland Fabricators. Scotland.

FF: Which was another joint venture, Brown & Root and Wimpey, a British company, fifty-fifty joint venture. We did a lot of offshore work up there, platforms. We even did a jacket for Norway up there.

TP: Are there any other stories you can tell about the Hutton project? Because it is kind of a milestone as the very first TLP.

FF: Yes, it was.

TP: Did you have any idea that would be really the concept of choice for deep water going forward, at least for a while?

FF: Well, that was the idea of the whole thing, yes, particularly Conoco's idea. They were looking to go into deeper water. Of course, there's lots of TLPs now all around the world, but that was the first one.

TP: Were there any particular challenges that you faced doing that?

FF: Well, we had some challenges with the welding of the tubes that made up the floating structure, getting the welds correct, and we finally did.

TP: And the tensions, was that an issue at all?

FF: No, there wasn't any problems, really.

TP: How long did you stay over in London?

FF: Until '89. I had the onshore as well as offshore, in that position as chief operating officer.

TP: Did you come back to the U.S. after that?

FF: Yes, I came back to the U.S. for my last three years, before I retired in '89.

TP: So you retired in '92?

FF: Ninety-two. Came back in '89, retired in '92, yes.

TP: So you went right through the big downturn, which was, I guess, tough for a lot of the service companies and engineering construction companies.

FF: Yes. The bad year was '86, ~~as far as I remember~~ for Brown & Root, anyway. Quite a few corporate officers were laid off, but I managed to survive.

TP: Then after Brown & Root, you joined up with Bill Stallworth, is that right?

FF: Yes. Well, I had my own little consulting company Frankhouser and Associates, and Bill and I joined up, Stallworth Frankhouser and Associates, and we had some work in Hibernia Field up in Canada, furnishing senior people. That was our main focus, to furnish senior experienced people that we knew for projects at oil companies. So that was one of them. Let's see. What else did we do? We had a couple other jobs.

TP: Sea Tank [phonetic], you mentioned.

FF: That was back—

TP: That was back earlier, yes.

FF: With the French. With C. G. Doris [phonetic] [unclear] We didn't get it. I made a lot of trips to Paris.

TP: That's not bad. Are there other stories you can tell, other individuals that you had fond memories of working with over time?

FF: Oh, sure.

TP: Anyone in particular that you could tell us about?

FF: Well, I mentioned some earlier.

TP: Did you ever know Peter Heerema? Did you get to work with Heerema?

FF: I knew him, not very well. Like I said, we had to use Heerema's barge to make the 2000–ton lifts on the BP Forties. I did know him. Yes, he was quite a character. Interesting fellow.

TP: I know Brown & Root was competing against him at Lake Maracaibo for a while.

FF: Right. That's where he got started in the offshore business after World War II. That's another aspect of the [unclear] oil ocean structures. We went down to Maracaibo, and we had a concept of using small concrete tubular platforms in lieu of the steel ones they had down there. So we did a lot of research in that, met with the clients and so forth, but never really got the job.

TP: Yes, because they had that Teredo problem with the wood, and they eventually had to move to aluminum. They did up some aluminum structures.

FF: Yes, aluminum is very difficult to weld. That's one of the problems. But we proposed to do concrete, but it didn't take off. [unclear].

TP: Looking back over your whole career, what has been the most memorable part of it?

FF: The Forties. At the end of Forties, when we were having a commemoration at the very end of the job, the Queen [unclear]. We were all together in Aberdeen. They invited a few of us to meet the Queen, and at that time Prince Philip came up to me and he said, "I say, what's all this about pigs in the pipes?" He was just kidding. He knew.

TP: Did you get to meet the Queen?

FF: Yes, I got to shake hands with the Queen. It was kind of short. She said, "And what do you do?" I don't remember what I said.

TP: Do you have anything else you'd like to tell us before we go?

FF: No. I appreciate the honor of coming in here for this interview, and for the Hall of Fame.

TP: To be an industry pioneer is really an exceptional thing.

FF: Right.

TP: Congratulations, and I hope you have a good time this evening.

FF: Thank you very much.

[End of interview]